



BOROUGH OF MACCLESFIELD.



REPORT

ON THE

HEALTH OF MACCLESFIELD,

FOR THE YEAR 1906.

BY

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ANNUAL REPORT

OF

The Medical Officer of Health

For the Year ending December 31st, 1906.

—:—

TO THE MAYOR AND MEMBERS OF THE MACCLESFIELD
TOWN COUNCIL.

MR. MAYOR AND GENTLEMEN,

I have the honour to submit for your consideration my Eighth Annual Report on the Health and Sanitary Administration of the Borough of Macclesfield.

POPULATION.

In 1901 the Census gave the population as being 34,624 persons, living in 8,634 houses, with an average of 4 persons to a house.

In 1904 Mr. T. S. Walker, the Assistant Overseer, kindly supplied me with the then number of occupied dwelling houses, which was 8,595. He is now of opinion that the number remains about the same, that would give our present population 34,380. I am disposed to think this is a correct estimate and that the population has declined somewhat. I have however for the purpose of this Report returned it at the 1901 Census number, viz 34,624, which was made up as follows:—

West Macclesfield	17,297
East ,,	12,440
Sutton	4,887
<hr/>	
Total Population of Borough	34,624
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ACREAGE AND DENSITY OF POPULATION.

The area of the Borough in acres is 3,214.

The Density of population is 10.8 persons to an acre.

ELEVATION OF THE TOWN.

The elevation of the town is between 400 and 500 feet above sea level.

The rain gauge in the West Park is 501 feet above sea level.

PRINCIPAL VITAL STATISTICS FOR 1906.

	Year 1906	Year 1905
Population	34,624 ..	34,624
Births—Male	402 ..	389
Female	360 ..	362
Total Births	<u>762</u> ..	<u>751</u>
Annual Birth Rate per 1,000 of Population..	22.0 ..	21.6
Deaths	591 ..	628
Death Rate per 1,000 of Population	17.0 ..	18.1
Excess of Registered Births over Deaths	171 ..	143
Infantile Mortality Rate, i.e., Deaths under one year of age per 1,000 Born	123 ..	149
Zymotic Death Rate	1.5 ..	1.6

BIRTHS AND BIRTH RATES.

Number of Births Registered in 1906	762
" " " 1905	752
Birth Rate per 1,000 of Population	22.0
" " " 1905	21.6
Birth Rate, England and Wales, 1906	27.0

The following Table shows the Birth Rates since 1874, with quinquennial averages for last twenty years :—

Years.	Birth-rate.	Years.	Birth-rate.	Years.	Birth-rate.
1874	33.5	1885	29.8	1896	26.8
1875	35.2	1886	28.9	1897	27.1
1876	35.2	1887	28.2	1898	26.4
1877	34.3	1888	25.8	1899	24.6
1878	31.9	1889	26.2	1900	23.6
1879	34.7	1890	27.0	1901	22.2
1880	31.4	1891	28.0	1902	21.4
1881	31.4	1892	27.4	1903	25.1
1882	32.1	1893	25.0	1904	22.6
1883	28.6	1894	28.2	1905	21.6
1884	31.4	1895	25.4	1906	22.0

In considering our low birth rate, we have to keep in mind the fact that in Macclesfield there are an excessive proportion of females to males. The 1901 Census give it as 15,377 males to 19,247 females.

Now, the proportion of males to females for the whole of England and Wales is about 940 males to every 1,000 females, therefore on this basis there ought to be over 18,000 males in Macclesfield instead of 15,377, thus the population of the Borough contains an excessive proportion of females.

This naturally conduces to a low birth-rate. Again Macclesfield shares with the Country generally, in this decline, only here it is more marked for the reason just given.

This question of declining birth-rate is one of national as well as Municipal importance, and has closely engaged the attention of Sociologists during the last year. A Report on this matter presented to University College, London, the data for which were most carefully drawn from National and Municipal statistics resulted in the following conclusions :—

“As far as the present investigation goes, it demonstrates, I think, conclusively that for the London districts there is a very close relationship between undesirable social status and a high birth-rate. In districts where there is over-crowding, where there is a superabundance of the lowest type of labour, where it is needful to employ many young children in order to earn daily bread for the family, where infantile mortality is greatest, there the wives of reproductive ages have most children. Where there is more culture and education

as shown by a higher proportion of professional men, where there is more leisure and comfort as shown by a higher percentage of domestic servants, where the traders who appeal to the improvident and thriftless are fewer in number, there the birth-rate is least. Again, where there is more general pauperism, where signs of bad environment like phthisis are prevalent, where pauper lunatics are most plentiful, there the birth-rate is highest. Cancer alone of the undesirable physical conditions dealt with so far seems more prevalent in the prosperous and cultured districts and to be associated with a lower birth-rate."

"Nor is the higher birth-rate of the undesirable elements compensated by the higher death-rate. The net fertility of the lower status remains higher than that of the superior status. The relationship between inferior status and high birth-rate has practically doubled during the last fifty years, and it is clear that in London at least the reduction in the size of families has begun at the wrong end of the social scale, and is increasing in the wrong way. I have brought forward evidence enough to show that the birth-rate of the abler and more capable stocks is decreasing relatively to the mentally and physically feebler stocks."

NUMBER OF BIRTHS DURING THE LAST 15 YEARS.

Year.	West Macclesfield		East Macclesfield and Hurdsfield.		Sutton.
1890	462	....	374	.... 177
1891	374	....	177	.... 158
1892	437	....	408	.... 144
1893	.. .	427	....	372	.... 136
1894	471	....	380	.... 166
1895	433	....	350	.... 112
1896	441	....	374	.... 149
1897	472	....	378	.... 127
1898	422	....	383	.... 148
1899	417	....	431	.... 128
1900	429	....	305	.... 119
1901	365	....	283	.... 123
1902	350	....	300	.... 92
1903	399	....	357	.... 114
1904	380	....	284	.... 120
1905	350	....	286	.... 116
1906	359	....	279	.... 124

ILLEGITIMATE BIRTH--RATE.

The illegitimate birth-rate for the year is 1.5 per 1,000 of population as compared with 1.3 last year.

The percentage of illegitimate children born, compared with last year is 7.2 against 6.3.

DISTRICT BIRTH--RATE.

District.	Population.		Birth-rate. 1906		Birth-rate 1905
West Macclesfield	16,500	..	21.7	..	21.0
East Macclesfield	12,440	..	22.4	..	22.0
Sutton	4,887	..	25.3	..	23.0

The population of West Macclesfield is approximately correct, a deduction having been made for the inmates of the Workhouse and Asylum.

DEATHS AND DEATH--RATES.

Death-rate for the Borough for 1906	17.0
,, ,, ,, ,, 1905	18.1
Death-rate for "England and Wales, 1906	15.4

664 deaths have been registered in the Borough during 1906, this number includes the deaths of 72 people not belonging to the Borough, 14 of whom died in the Workhouse, 5 in the Infirmary and 53 in the Asylum. Deducting these we have a total number of deaths of inhabitants of the Borough of 591, this corresponds to an annual mortality rate of 17.0 per 1,000 of inhabitants.

Table showing Deaths Rates since 1874, with quinquennial averages for the last twenty-five years.

Years.	Death-rate.	Years.	Death-rate.	Years.	Death-rate.
1874	26.6	1885	20.4	1896	20.0
1875	25.0	1886	20.0	1897	20.3
1876	28.1	1887	23.8	1898	18.5
1877	20.2	1888	18.3	1899	20.4
1878	23.8	1889	21.0	1900	19.6
1879	23.2	1890	21.9	1901	18.5
1880	21.7	1891	20.8	1902	15.1
1881	23.6	1892	25.1	1903	17.3
1882	23.0	1893	20.6	1904	20.1
1883	23.6	1894	17.7	1905	18.1
1884	22.0	1895	22.5	1906	17.0

This year presents one of the lowest death-rates recorded, being only excelled by the year 1902, which was a phenomenal year for low mortality rates, the summer being excessively wet and cold.

The five yearly averages show conclusively that Sanitary improvements are slowly, but surely telling in the improved health of the inhabitants of this town. It is not overstepping the bounds of reasonable probability to assert that we ought to have and shall hope to attain to a normal death-rate of 14 or 15 per 1,000 within the next five years.

The immense saving in life, to say nothing of the diminution in the amount of sickness, incapacity for work, poverty and pauperism, is well worth striving for and although diminished death and sickness rates are difficult to interpret in coin of the realm and cannot be set off directly to reduce the district and poor rates, yet by diminishing poverty and pauperism and increasing the earning capacity of the working classes, they do most certainly conduce to the prosperity, happiness and well-being of the people. The fall in the death-rate this year of 1.1 per 1,000 is equal to a saving of 36 lives to the town, and a corresponding reduction in the amount of sickness, with all its attendant suffering and loss.

PRINCIPAL DEATH RATES FOR THE LAST FIVE YEARS.

	Per 1,000 of Population.				
	1906	1905	1904	1903	1902
Zymotic death-rate	1.5	1.6	2.3	0.9	0.3
Phthisis (Consumption)	1.4	1.1	1.3	1.2	1.5
Other forms of Tuberculosis	0.5	0.7	0.8	0.5	0.5
Respiratory (Bronchitis, &c.)....	2.3	2.6	3.1	2.1	1.9
Infantile Mortality	123	149	178	134	102
Cancer	1.0	1.5	1.0	1.0	0.8

QUINQUENNIAL AVERAGES.

Zymotic death-rate	1.32	per 1,000 inhabitants
Phthisis death-rate	1.30	„ „
Other forms of Tuberculosis	0.60	„ „
Respiratory death-rate ..	2.40	„ „
Infantile death-rate	137	„ born
Cancer death-rate	1.06	„ inhabitants

The following Table sets forth the various diseases in which there has been a marked increased or decreased mortality compared with last year's figures, the sign x indicating an increase, and (—) a decrease.

Increase.			Decrease.		
Scarlet Fever	x	5	Influenza	—	5
Measles	x	5	Other Septic Diseases	—	8
Enteritis	x	9	Whooping Cough ..	—	18
Pulmonary Tubercu-			Diarrhœa	—	12
losis	x	10	Rheumatic Fever	—	5
Pneumonia	x	6	Bronchitis	—	13
Convulsions	x	20	Cancer.....	—	17
			Marasmus	—	8
			General Tuberculosis	—	6

CAUSES OF DEATH IN MACCLESFIELD.

Table showing cause of death and the age periods at which such deaths have occurred during the year ending December 31st, 1906:—

Diseases.	Under					Over		Total.
	1 yr.	1-5	5-15	15-25	25-65	65		
Scarlatina .....	..	10	..	2	..	..	..	12
Diphtheria	1	..	3	..	2	..	..	6
Membranous Croup .....	..	..	1	..	..	..	..	1
Typhoid Fever .....	..	..	..	..	1	..	..	1
Measles	4	..	2	..	..	..	..	6
Diarrhoea	4	..	3	..	..	..	4	11
Enteritis	14	..	..	..	..	..	1	15
Influenza .....	..	..	..	..	1	..	5	6
Puerperal Fever .....	..	..	..	..	1	..	..	1
Erysipelas .....	..	..	..	..	..	..	1	1
Bright's Disease .....	..	1	..	1	..	17	5	25
Pulmonary Tuberculosis .....	..	1	..	..	5	39	6	51
Bronchitis	5	..	1	..	1	8	11	27
Pneumonia	8	..	8	..	1	21	7	45
Pleurisy .....	..	..	..	..	1	..	2	3
Other Respiratory Diseases	1	..	2	..	..	1	1	5
Alcoholish and Cirrhosis of Liver .....	..	..	..	..	7	..	1	8
Heart Disease	2	..	..	2	..	39	24	67
Suicide .....	..	..	..	..	2	..	2	4
Injuries	1	..	3	..	1	2	3	10
Venereal Diseases	5	..	1	..	..	1	..	7
Cancer .....	..	1	..	..	1	17	17	36
Convulsions	19	..	5	1	..	5	..	30
Apoplexy .....	..	..	..	..	..	14	19	33
Other Brain Diseases ..	..	..	..	..	1	6	5	12
Diseases and Accidents of Parturition	1	..	..	..	3	1	..	5
Premature Birth	21	..	..	..	..	..	..	21
Marasmus	4	..	..	..	..	..	..	4
Atrophy (Senile) .....	..	..	..	..	..	..	72	72
Tabes Mesenterica	3	..	1	..	..	1	..	5
Tubercular Meningitis ..	..	..	4	1	..	..	..	5
Tuberculosis .....	..	2	..	1	1	2	2	8
All other Diseases	1	..	4	..	..	21	22	48
Totals ..	94	52	12	15	208	210	591	

DEATHS OF PERSONS BELONGING TO MACCLESFIELD.
Year ending December 31st, 1905.

Diseases.	Under						Over		Total.	
	6 m'ths	1yr.	1-5	5-15	15-25	25-65	65			
Small-pox .....	..	..	..	..	..	..	..	1	..	1
Scarlatina .....	..	..	6	..	1	..	..	..	..	7
Diphtheria .....	..	..	5	..	..	..	..	..	..	5
Membranous Croup	..	..	1	..	..	..	..	..	..	1
Influenza .....	..	..	..	..	..	..	6	..	5	11
Erysipelas .....	..	..	..	..	..	..	1	..	2	3
OtherSepticDiseases	..	1	..	..	1	..	6	..	..	8
Measles .....	..	..	1	..	..	..	..	..	..	1
Whooping Cough..	1	..	9	..	8	..	..	..	..	18
Diarrhœa	13	..	2	..	6	..	..	..	2	23
Enteritis	4	..	..	1	..	..	..	..	1	6
Rheumatic Fever	..	..	..	2	..	1	..	2	..	5
Bright's Disease ..	..	..	..	1	..	..	17	..	9	27
Pulmonary Tuber- culosis .....	..	..	..	..	..	13	..	27	1	41
Bronchitis	3	..	3	..	3	..	..	12	..	19
Pneumonia	2	..	5	..	5	..	2	..	16	39
Other Respiratory Diseases.....	..	..	..	..	..	2	..	1	..	3
Alcoholism & Cirr- hosis of Liver ..	..	..	..	..	..	..	5	..	2	7
Heart Disease ....	..	..	..	6	..	..	27	..	31	64
Suicide .....	..	..	..	..	..	..	3	..	..	3
Injuries	4	..	..	..	..	..	5	..	1	10
Venereal Diseases	8	..	..	..	..	..	..	..	..	8
Cancer .....	..	..	..	..	..	1	..	34	..	53
Convulsions	6	..	..	3	..	..	..	..	1	10
Apoplexy .....	..	..	..	6	..	..	8	..	18	26
Insanity .....	..	..	..	..	..	..	2	..	1	3
OtherBrainDiseases	1	..	..	2	..	1	..	7	..	12
Premature Birth ..	23	..	..	..	..	..	..	..	..	23
Marasmus	10	..	1	..	1	..	..	..	..	12
Atrophy (Senile) ..	..	..	..	..	..	..	2	..	70	72
Tabes Mesenterica	..	2	..	2	..	..	..	..	..	4
Tubercular Mening- itis	1	..	1	..	4	..	1	..	..	7
Tuberculosis .....	..	66	..	3	..	2	..	3	..	14
All other Diseases..	5	..	1	..	2	..	3	..	7	27
Totals	81	..	31	..	53	..	24	..	28	211
									206	628

UNCERTIFIED DEATHS.

Two deaths have been returned to me by the Registrars as
 “uncertified.”

QUARTERLY DEATH RETURNS.

For the Year 1906.

	1st. Quarter	2nd. Quarter	3rd. Quarter	4th. Quarter	Totals for year.
West Macclesfield	81 ..	57 ..	63 ..	70 ..	271
East Macclesfield	79 ..	59 ..	57 ..	60 ..	255
Sutton	13 ..	8 ..	22 ..	22 ..	65
Totals	173 ..	124 ..	142 ..	152 ..	591

Death-rate per 1,000 of

population	19 ..	14 ..	16 ..	17
Ditto in 1905	20 ..	16 ..	15 ..	20
Ditto in 1904	22 ..	14 ..	18 ..	26
Ditto in 1903	16 ..	18 ..	16 ..	17

DEATHS OF PERSONS BELONGING TO WEST MACCLESFIELD.

Quarter ending March 31st, 1906.

	Under 1 year		1-5	5-15	15-25	25-65	Over 65		Total
Influenza .....	..	..	..	..	..	..	1	..	1
Puerperal Fever .....	..	..	..	..	..	1	..	..	1
Bright's Disease .....	..	1	..	..	..	2	..	..	3
Pulmonary Tuberculosis .....	..	..	..	..	..	2	..	1	3
Bronchitis .....	..	..	..	..	..	2	..	3	5
Pneumonia .....	..	1	..	..	..	5	..	5	11
Other Respiratory Diseases .....	..	1	..	..	..	..	1	..	2
Alcoholish and Cirrhosis of Liver .....	..	..	..	..	..	1	..	..	1
Heart Disease	1	..	..	..	..	12	..	2	15
Suicide .....	..	..	..	..	..	..	1	..	1
Convulsions	1	..	1	..	..	1	..	..	3
Apoplexy .....	..	..	..	..	..	5	..	2	7
Other Brain Diseases ..	..	..	..	..	..	3	..	1	4
Premature Birth	2	..	..	..	..	..	..	..	2
Atrophy (Senile) .....	..	..	..	..	..	..	15	..	15
Tabes Mesenterica	1	..	..	..	..	..	..	..	1
Tuberculosis .....	..	..	..	..	..	..	1	..	1
All other Diseases .....	..	..	..	..	..	2	..	3	5
Totals	5	..	4	..	..	36	..	36	81

DEATHS OF PERSONS BELONGING TO WEST MACCLESFIELD.

Quarter ending 30th June, 1906.

Diseases.	Under			Over				Total			
	1 year	1-5	5-15	15-25	25-65	65					
Scarlatina	2	..	..	..	..	..	2	
Influenza	2	..	2			
Bright's Disease	5	1	..	6			
Pulmonary Tuberculosis..	3	1	..	4			
Bronchitis	1	..	1			
Pneumonia	1	..	2	..	1	..	..	4	
Other Respiratory Diseases	1	..	..	1			
Alcoholish and Cirrhosis of Liver	1	..	..	1			
Heart Disease	3	3	..	6			
Injuries	1	..	..	..	1	..	2	
Venereal Diseases	1	..	..	..	..	..	..	1
Cancer	2	2	..	4			
Convulsions	1	..	..	..	..	..	1	
Apoplexy	2	1	..	3			
Other Brain Diseases	1	..	2	..	3			
Diseases and Accidents of Parturition	1	..	..	1			
Premature Birth	2	..	..	..	..	..	..	2
Atrophy (Senile)	11	..	11			
All other diseases	1	1	..	2			
Totals	4	..	6	..	1	..	20	..	26	..	57

DEATHS OF PERSONS BELONGING TO WEST MACCLESFIELD.

Quarter ending September, 1906.

Diseases.	Under					Over		Total
	1 year	1-5	5-15	15-25	25-65	65		
Scarlatina . . . . .	..	1	..	..	..	..	1
Membranous Croup . . . .	..	..	1	..	..	..	1
Measles	1	..	..	..	..	..	1
Diarrhœa	1	..	1	..	..	2	4
Enteritis	2	..	..	..	..	..	2
Pulmonary Tuberculosis	..	..	..	1	..	5	6
Bronchitis . . . . .	..	..	..	1	..	..	1
Pneumonia . . . . .	..	1	..	1	..	..	2
Heart Disease . . . . .	..	..	..	..	1	5	6
Venereal Diseases	1	..	..	..	1	..	2
Cancer . . . . .	..	..	..	1	1	3	5
Convulsions	2	..	..	..	1	..	3
Apoplexy . . . . .	..	..	..	..	..	2	2
Premature Birth	4	..	..	..	..	..	4
Atrophy (Senile) . . . . .	..	..	..	..	..	9	9
Tabes Mesenterica	2	..	..	..	..	..	2
Tubercular Meningitis ..	..	1	..	..	..	..	1
Tuberculosis . . . . .	..	1	..	..	..	..	1
All other diseases . . . . .	..	1	..	..	5	4	10
Totals	13	6	1	4	14	25	63	

DEATHS OF PERSONS BELONGING TO WEST MACCLESFIELD.

Quarter ending December, 1906.

Diseases	Under					Over		Total
	1 year	1-5	5-15	15-25	25-65	65		
Scarlatina . . . . .	..	2	..	1	..	..	..	3
Diphtheria . . . . .	..	2	..	..	..	..	..	2
Influenza . . . . .	..	..	..	..	..	1	..	1
Measles	1	..	..	..	..	..	..	1
Enteritis	1	..	..	..	..	..	..	1
Bright's Disease . . . . .	..	..	..	..	7	1	..	8
Pulmonary Tuberculosis	..	..	..	2	1	..	..	3
Bronchitis	1	..	..	..	2	1	..	4
Pneumonia . . . . .	..	..	..	..	1	..	..	1
Alcoholish and Cirrhosis of Liver . . . . .	..	..	..	..	2	..	..	2
Heart Disease . . . . .	..	..	..	..	2	5	..	7
Injuries . . . . .	..	..	..	..	..	1	..	1
Venereal Diseases . . . . .	..	1	..	..	..	..	..	1
Cancer . . . . .	..	..	..	..	2	3	..	5
Convulsions	2	..	..	..	2	..	..	4
Apoplexy . . . . .	..	..	..	..	1	5	..	6
Premature Birth	1	..	..	..	..	..	..	1
Atrophy (Senile) . . . . .	..	..	..	..	..	9	..	9
Tabes Mesenterica . . . . .	..	1	..	..	1	..	..	2
Tuberculosis . . . . .	..	..	..	..	1	..	..	1
All other diseases . . . . .	..	1	..	..	1	5	..	7
Totals	6	7	1	2	23	31	70	

DEATHS IN EAST MACCLESFIELD.

Quarter ending March 31st, 1906.

Diseases.	Under					Over		Total
	1 year	1-5	5-15	15-25	25-65	65		
Scarlatina .....	..	1	..	..	..	..	..	1
Enteritis	1	..	..	..	..	..	..	1
Bright's Disease .....	..	..	1	..	1	..	1	3
Pulmonary Tuberculosis .....	..	..	..	1	..	9	1	11
Bronchitis	2	..	1	..	1	..	2	7
Pneumonia	5	..	3	..	..	4	1	13
Other Respiratory Diseases	1	..	..	..	..	..	..	1
Alcoholish and Cirrhosis of Liver .....	..	..	..	..	..	..	1	1
Heart Disease .....	..	..	..	..	5	..	2	7
Injuries .....	..	..	..	1	..	..	1	2
Venereal Diseases	2	..	..	..	..	..	..	2
Cancer .....	..	..	..	..	..	..	1	1
Convulsions	5	..	1	..	..	..	..	6
Apoplexy .....	..	..	..	..	1	..	1	2
Diseases and Accidents of Parturition .....	..	..	..	2	..	..	..	2
Premature Birth	2	..	..	..	..	..	..	2
Marasmus	2	..	..	..	..	..	..	2
Atrophy (Senile) .....	..	..	..	..	..	..	8	8
Tubercular Meningitis ..	..	1	..	..	..	..	..	1
Tuberculosis .....	..	..	..	1	..	..	..	1
All other diseases .....	..	..	..	..	5	..	..	5
Totals	20	7	2	6	26	18	79	

DEATHS IN EAST MACCLESFIELD.

Quarter ending June, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Scarlatina .....	..	2	..	1	..	..	3
Influenza .....	..	..	..	..	..	1	1
Diarrhoea	1	..	..	..	..	..	1
Enteritis	1	..	..	..	..	..	1
Bright's Disease .....	..	..	..	..	1	1	2
Pulmonary Tuberculosis	..	1	..	..	2	..	3
Bronchitis	1	..	..	..	2	1	4
Pneumonia .....	..	..	..	..	4	..	4
Pleurisy .....	..	..	..	..	1	..	1
Other Respiratory Diseases	..	1	..	..	..	..	1
Heart Disease .....	..	..	..	..	5	1	6
Suicide .....	..	..	..	..	1	..	1
Injuries .....	..	1	..	..	..	..	1
Cancer .....	..	1	..	..	4	2	7
Convulsions	3	..	..	..	1	..	4
Apoplexy .....	..	..	..	..	3	..	3
Other Brain Diseases ..	..	..	..	..	1	1	2
Diseases and Accidents of Parturition	1	..	..	..	..	..	1
Premature Birth	1	..	..	..	..	..	1
Atrophy (Senile) .....	..	..	..	..	..	5	5
Tubercular Meningitis ..	..	..	1	..	..	..	1
Tuberculosis .....	..	1	..	..	..	1	2
All other diseases .....	..	..	..	..	2	2	4
Totals	8	7	2	..	27	15	59

DEATHS IN EAST MACCLESFIELD.

Quarter ending September, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Scarlatina . . . . .	..	2	..	..	..	..	2
Diphtheria . . . . .	..	2	1	..	..	..	3
Measles	2	1	..	..	..	..	3
Diarrhœa	2	1	..	..	..	..	3
Enteritis	4	..	..	..	..	..	4
Pulmonary Tuberculosis	..	..	..	..	2	1	3
Pneumonia . . . . .	..	..	..	..	1	..	1
Pleurisy . . . . .	..	..	..	..	..	1	1
Alcoholish and Cirrhosis of Liver . . . . .	..	..	..	..	2	..	2
Heart Disease . . . . .	..	..	1	..	2	1	4
Injuries . . . . .	..	1	..	1	..	..	2
Venereal Diseases	1	..	..	..	..	..	1
Cancer . . . . .	..	..	..	..	4	3	7
Convulsions . . . . .	..	..	1	..	..	..	1
Apoplexy . . . . .	..	..	..	..	2	2	4
Other Brain Diseases ..	..	..	..	..	2	..	2
Premature Birth	2	..	..	..	..	..	2
Marasmus	1	..	..	..	..	..	1
Atrophy (Senile) . . . . .	..	..	..	..	..	6	6
All other diseases	1	..	..	..	1	3	5
Totals	13	7	3	1	16	17	57

DEATHS IN EAST MACCLESFIELD.

Quarter ending December, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Diphtheria .....	..	..	1	..	..	..	1
Enteritis .....	..	..	..	..	..	1	1
Bright's Disease .....	..	..	..	..	1	1	2
Pulmonary Tuberculosis .....	..	..	..	..	8	2	10
Bronchitis .....	..	..	..	..	1	1	2
Pneumonia	1	..	1	..	..	..	2
Pleurisy .....	..	..	..	..	..	1	1
Heart Disease	1	..	..	..	5	3	9
Suicide .....	..	..	..	..	1	..	1
Injuries	1	..	..	..	1	..	2
Cancer .....	..	..	..	..	2	2	4
Convulsions	3	..	2	..	..	..	5
Apoplexy .....	..	..	..	..	..	3	3
Other Brain Diseases ..	..	..	..	..	..	1	1
Diseases and Accidents of Parturition .....	..	..	..	1	..	..	1
Premature Birth	3	..	..	..	..	..	3
Atrophy (Senile) .....	..	..	..	..	..	4	4
Tubercular Meningitis ..	..	1	..	..	..	..	1
Tuberculosis .....	..	..	..	..	1	..	1
All other diseases .....	..	1	..	..	3	2	6
Totals	9	5	1	1	23	21	60

DEATHS IN SUTTON.

Quarter ending March 31st, 1906.

Diseases.	Under 1 year		1-5	5-15	15-25	25-65	Over 65		Total
Enteritis	1	..	..	..	..	..	..	..	1
Bright's Disease .....	..	..	..	..	..	..	1	..	1
Pulmonary Tuberculosis .....	..	..	..	..	..	2	..	..	2
Bronchitis	1	..	..	..	..	..	..	..	1
Pneumonia	1	..	..	..	..	2	..	..	3
Heart Disease .....	..	..	..	..	..	..	1	..	1
Apoplexy .....	..	..	..	..	..	..	1	..	1
Premature Birth	1	..	..	..	..	..	..	..	1
Tubercular Meningitis ..	..	..	1	..	..	..	..	..	1
All other diseases .....	..	..	..	..	..	..	1	..	1
Totals	4	..	1	..	..	4	..	4	.. 13

DEATHS OF PERSONS IN SUTTON.

Quarter ending June, 1906.

Diseases.	Under			Over			Total
	1 year	1-5	5-15	15-25	25-65	65	
Measles . . . . .	..	1	..	..	..	..	1
Bronchitis . . . . .	..	..	..	..	..	1	1
Cancer . . . . .	..	..	..	..	1	1	2
Convulsions	1	..	..	..	..	..	1
Premature Birth	1	..	..	..	..	..	1
Atrophy (Senile) . . . . .	..	..	..	..	..	1	1
Tuberculosis . . . . .	..	..	1	..	..	..	1
Totals	2	1	1	..	1	3	8

DEATHS IN SUTTON.

Quarter ending September, 1906.

Diseases.	Under					Over		Total
	1 year	1-5	5-15	15-25	25-65	65		
Typhoid Fever .....	..	..	..	..	1	..	..	1
Influenza .....	..	..	..	..	1	..	..	1
Erysipelas .....	..	..	..	..	..	1	..	1
Diarrhœa .....	..	1	..	..	..	2	..	3
Enteritis	3	..	..	..	..	..	..	3
Pulmonary Tuberculosis	..	..	..	1	2	..	..	3
Heart Disease .....	..	..	..	..	4	..	..	4
Suicide .....	..	..	..	..	..	1	..	1
Apoplexy .....	..	..	..	..	..	1	..	1
Premature Birth	1	..	..	..	..	..	..	1
Atrophy (Senile) .....	..	..	..	..	..	2	..	2
All other diseases .....	..	1	..	..	..	..	..	1
Totals	4	2	..	1	8	7	..	22

DEATHS IN SUTTON.

Quarter ending December 31st, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Enteritis	1 ..	..	..	..	..	..	1
Pulmonary Tuberculosis .....	..	..	..	..	3 ..	..	3
Bronchitis .....	..	..	..	..	..	1 ..	1
Pneumonia .....	..	..	..	..	3 ..	1 ..	4
Alcoholish and Cirrhosis of Liver .....	..	..	..	..	1 ..	..	1
Heart Disease .....	..	..	1 ..	..	..	1 ..	2
Cancer .....	..	..	..	..	1 ..	..	1
Convulsions	2 ..	..	..	..	..	..	2
Apoplexy .....	..	..	..	..	..	1 ..	1
Premature Birth	1 ..	..	..	..	..	..	1
Marasmus	1 ..	..	..	..	..	..	1
Atrophy (Senile) .....	..	..	..	..	..	2 ..	2
All other diseases .....	..	..	..	..	1 ..	1 ..	2
Totals	5 ..	..	1 ..	..	9 ..	7 ..	22

DISTRICT MORTALITY.

In considering District Mortality we must bear in mind that many persons die in West Macclesfield from diseases contracted in either East Macclesfield or Sutton. This arises from the fact that all the Public Institutions for the reception of sick and infirm people are situated in West Macclesfield. With the valuable help of the Registrar of Deaths for West Macclesfield, I am enabled to properly distribute these deaths to the several districts to which they originally belonged, and thus prevent the death-rate of West Macclesfield being unduly raised, to the advantage of the remaining districts.

PRINCIPAL DISTRICT MORTALITY RATES.

Year, 1906.

Macclesfield.	General Death-rate.	Zymotic death rate.	Respiratory death-rate.	Phthisis death-rate.	Deaths from other forms of Tuberculosis.	Infantile Mortality rate.
West	15.6	1.0	1.8	0.9	0.5	82
East	20.4	1.9	3.0	2.1	0.5	179
Sutton	13.3	2.0	2.0	1.6	0.4	120

Year, 1905.

Macclesfield.	General Death-rate.	Zymotic death rate.	Respiratory death-rate.	Phthisis death-rate.	Deaths from other forms of Tuberculosis,	Infantile Mortality rate.
West	17.5	1.5	2.1	1.3	0.4	168
East	18.0	1.6	2.4	0.9	1.0	132
Sutton	20.2	1.6	3.0	1.2	0.8	129

Year, 1904.

Macclesfield.	Death-rate per 1,000 Inhabitants.	Zymotic death rate.	Respiratory rate.	Phthisis death-rate.	Deaths from other forms of Tuberculosis.	Infantile Mortality rate.
West	19.3	2.0	2.6	1.3	0.8	173
East	21.2	2.9	3.6	1.7	1.0	190
Sutton	20.2	1.6	3.0	0.2	0.4	166

Year, 1903.

Macclesfield.	Death-rate per 1,000 Inhabitants.	Zymotic death rate.	Respiratory death-rate.	Phthisis death-rate.	Deaths from other forms of Tuberculosis.	Infantile Mortality rate.
West	17.7	0.7	1.5	1.2	0.2	110
East	19.2	1.5	3.0	1.2	0.6	170
Sutton	11.0	0.2	1.2	1.0	1.0	114

Year, 1902.

Macclesfield.	Death-rate per 1,000 Inhabitants.	Zymotic death rate.	Respiratory death-rate.	Phthisis death-rate.	Deaths from other forms of Tuberculosis.	Infantile Mortality rate.
West	15.6	0.17	1.0	1.9	0.6	111
East	15.7	0.32	2.4	1.4	0.4	190
Sutton	12.0	0.81	1.4	0.4	0.1	65

In the district mortality figures all show an improvement, except East Macclesfield, which is most unsatisfactory. Its general death is increased. It is higher than West Macclesfield by 4.8 per thousand and higher than Sutton by 7.1 per thousand. The Infantile mortality rate is more than twice as great as West Macclesfield, and the death-rate from Phthisis or Consumption of the Lungs is three times as high as in West Macclesfield. This is a most serious indictment of a district and it is the duty of the Sanitary Authority to deal very drastically with all nuisances, over-crowding, &c., in this area. Its infantile mortality rate has invariably been above that of the other districts and its general death rate shares the same undesirable distinction.

The particular area is embraced in the Parishes of St. Peter's and St. Paul's, and the lower part of Hurdsfield. The extension of the sewers, the abolition of the privy-midden, the closing of single houses, the ventilating of courts and alleys, and more "house to house" visitation by the Sanitary Staff, Health visitors, &c., are required.

DEATHS IN WEST MACCLESFIELD.

Year ending December 31st, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Scarlatina .....	..	5	1	..	..	..	6
Diphtheria	1	1	..	..	..	..	2
Membranous Croup .....	..	..	1	..	..	..	1
Influenza .....	..	..	..	..	..	4	4
Puerperal Fever .....	..	..	..	..	1	..	1
Measles	2	..	..	..	..	..	2
Diarrhœa	1	1	..	..	..	2	4
Enteritis	3	..	..	..	..	..	3
Bright's Disease .....	..	1	..	..	14	2	17
Pulmonary Tuberculosis .....	..	..	..	3	11	2	16
Bronchitis	1	..	..	1	4	5	11
Pneumonia	1	4	..	1	7	5	18
Other Respiratory Diseases .....	..	1	..	..	1	1	3
Alcoholish and Cirrhosis of Liver .....	..	..	..	..	4	..	4
Heart Disease	1	..	..	..	18	15	34
Suicide .....	..	..	..	..	..	1	1
Injuries .....	..	1	..	..	..	2	3
Venereal Diseases	2	1	..	..	1	..	4
Cancer .....	..	..	..	1	5	8	14
Convulsions	5	2	..	..	4	..	11
Apoplexy .....	..	..	..	..	8	10	18
Other Brain Diseases ..	..	..	..	1	3	3	7
Diseases and Accidents of Parturition .....	..	..	..	..	1	..	1
Premature Birth	9	..	..	..	..	..	9
Atrophy (Senile) .....	..	..	..	..	..	44	44
Tabes Mesenterica	3	1	..	..	1	..	5
Tubercular Meningitis ..	..	1	..	..	..	..	1
Tuberculosis .....	..	1	..	..	1	1	3
All other diseases .....	..	2	..	..	9	13	24
Totals	29	22	2	7	93	118	271

DEATHS IN EAST MACCLESFIELD.

Year ending December 31st, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Scarlatina . . . . .	..	5	..	1	..	..	6
Diphtheria . . . . .	..	2	..	2	..	..	4
Influenza . . . . .	..	..	..	..	..	1	1
Measles	2	..	1	..	..	..	3
Diarrhœa	3	..	1	..	..	..	4
Enteritis	6	..	..	..	..	1	7
Bright's Disease . . . . .	..	..	1	..	1	3	7
Pulmonary Tuberculosis	..	1	..	..	1	21	27
Bronchitis	3	..	1	..	..	4	13
Pneumonia	6	..	4	..	..	9	20
Pleurisy . . . . .	..	..	..	..	1	2	3
Other Respiratory Diseases	1	..	1	..	..	..	2
Alcoholish and Cirrhosis of Liver . . . . .	..	..	..	..	2	1	3
Heart Disease	1	..	..	1	..	17	26
Suicide . . . . .	..	..	..	..	2	..	2
Injuries	1	..	2	..	1	2	7
Venereal Diseases	3	..	..	..	..	..	3
Cancer . . . . .	..	1	..	..	..	10	19
Convulsions	11	..	3	1	..	1	16
Apoplexy . . . . .	..	..	..	..	..	6	12
Other Brain Diseases ..	..	..	..	..	3	2	5
Diseases and Accidents of Parturition	1	..	..	..	3	..	4
Premature Birth	8	..	..	..	..	..	8
Marasmus	3	..	..	..	..	..	3
Atrophy (Senile) . . . . .	..	..	..	..	..	23	23
Tubercular Meningitis ..	..	2	..	1	..	..	3
Tuberculosis . . . . .	..	1	..	..	1	1	4
All other diseases	1	..	1	..	..	11	20
Totals	50	..	26	..	8	..	255

DEATHS IN SUTTON.

Year ending December 31st, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Typhoid Fever .....	..	..	..	..	1	..	1
Influenza .....	..	..	..	..	1	..	1
Erysipelas .....	..	..	..	..	..	1	1
Measles .....	..	1	..	..	..	..	1
Diarrhœa .....	..	1	..	..	..	2	3
Enteritis	5	..	..	..	..	..	5
Bright's Disease .....	..	..	..	..	..	1	1
Pulmonary Tuberculosis .....	..	..	..	1	7	..	8
Bronchitis	1	..	..	..	..	2	3
Pneumonia	1	..	..	..	5	1	7
Alcoholish and Cirrhosis of Liver .....	..	..	..	..	1	..	1
Heart Disease .....	..	..	1	..	4	2	7
Suicide .....	..	..	..	..	..	1	1
Cancer .....	..	..	..	..	2	1	3
Convulsions	3	..	..	..	..	..	3
Apoplexy .....	..	..	..	..	..	3	3
Premature Birth	4	..	..	..	..	..	4
Marasmus	1	..	..	..	..	..	1
Atrophy (Senile) .....	..	..	..	..	..	5	5
Tubercular Meningitis ..	..	1	..	..	..	..	1
Tuberculosis .....	..	..	1	..	..	..	1
All other Diseases .....	..	1	..	..	1	2	4
Totals	15	4	2	1	22	21	65

DEATHS IN PUBLIC INSTITUTIONS.

Year ending December 31st, 1906.

Diseases.	ISOLATION HOSPITAL.				WORKHOUSE.			
	1-5	5-15	Total	Under 1 yr.	15-25	25-65	Over 65	Total
Scarlatina	4	..	3	7	..	..	..	..
Influenza	1	1
Bright's Disease	1	..	1
Pulmonary Tuberculosis	1	11	3	15
Bronchitis	1	1
Pneumonia	6	1	7
Alcoholish & Cirrhosis of Liver	1	..	1
Heart Disease	6	6	12
Injuries	1	1
Veneral Diseases	4	..	..	..	..	4
Cancer	2	3	5
Convulsions	1	..	1
Apoplexy	6	2	8
Insanity	1	1
Other Brain Diseases	5	4	9
Atrophy (Senile)	1	..	19	19
Tubercular Meningitis	1
Tuberculosis	1	1	2
All other Diseases	1	..	..	2	4	7
Totals.....	4	3	7	5	2	42	47	96

DEATHS IN PUBLIC INSTITUTIONS, YEAR ENDING DECEMBER 31st, 1906. TOTALS.

Diseases.	INFIRMARY.				ASYLUM.				Total West Mac- cles- field
	Under 1 year	1-5	5-15	15-25	25-65	65	Total	Over Total 65	
Scarlatina .....	..	1	..	..	..	..	1	..	8
Diphtheria	1	..	..	..	..	..	1	..	1
Influenza .....	..	..	..	..	..	..	..	..	1
Diarrhoea	2	1	..	..	..	3	..	..	3
Enteritis	1	..	..	..	..	1	..	..	1
Bright's Disease .....	..	..	..	2	..	..	2	9	19
Pulmonary Tuberculosis.....	..	..	2	..	..	2	..	5	23
Bronchitis .....	..	..	..	..	..	..	..	..	1
Pneumonia	1	3	..	..	2	..	..	3	1
Pleurisy .....	..	..	..	..	..	..	..	1	17
Other Respiratory Diseases .....	..	1	..	..	..	..	1	..	1
Alcoholish & Cirrhosis of Liver ..	..	..	..	1	..	..	1	2	3
Heart Disease .....	..	..	1	2	..	3	..	1	2
Injuries	1	3	1	2	1	8	..	4	19
Veneral Diseases	1	..	..	..	..	..	..	..	9
Cancer .....	..	..	..	..	3	1	..	..	5
Convulsions	1	..	..	..	..	3	..	1	9
Apoplexy .....	..	..	..	..	..	1	..	4	6
Insanity .....	..	..	..	..	..	..	..	..	8
Other Brain Diseases .....	..	..	..	..	..	..	..	9	10
Diseases & Accidents of parturition	..	..	..	..	..	..	..	1	14
Atrophy (Senile) .....	..	..	..	..	..	1	..	..	1
Tubercular Meningitis .....	..	..	..	..	..	..	..	1	20
Tuberculosis .....	..	..	..	1	1	2	..	..	1
All other diseases	2	..	2	1	2	2	9	1	17
Totals	10	9	4	5	14	3	45	1	204

INFANTILE MORTALITY.

Total number of deaths under one year of age in the Borough.....	94
Death rate per 1,000 born	123
Ditto ditto 1905	149
Ditto ditto England and Wales (1906)	133
Ditto ditto 76 Great Towns (1906)	146
Ditto ditto 141 Smaller Towns (1906)	138

This rate begins to show signs of improving and it is particularly in West Macclesfield, where the improvement is greatest. For many years attention has been called to the need for greater effort being made to stem this preventable loss of child life and it really seems as if the conscience of the people had been at length aroused. The movement which, at first met with little or no support and in some quarters was ridiculed and belittled, has become popular, almost fashionable, and vigorous efforts are being put forth to induce mothers to learn and carry out the most elementary duty of female animal life viz. to properly suckle their young. I propose to analyse the causes of infantile deaths in the Borough.

PRINCIPAL CAUSES OF INFANTILE DEATHS.

	West	East	Sutton
Diarrhœa and Allied Diseases	4	9	5
Convulsions	5	11	3
Marasmus (Wasting)	0	3	1
Tabes Mesenterica	3	0	0
Total	12	23	9

The term “ Convulsions ” is misleading and means practically nothing. It may satisfy a Coroner’s Jury, but it should have no place on a medical certificate of the **cause** of death. Convulsions in young children may be due to Epilepsy, Meningitis, Dentition Rickets, Scarlet Fever, Measles, Pneumonia, Worms, Strychnine Poisoning, &c. Very frequently they are set up by improper feeding, but obviously it is most desirable that some definite information should be afforded as to the cause of the Convulsions. It would be put as reasonable to assign a death to “ Dropsy ” or “ Hæmorrhage.”

Vital Statistics require some approach to accuracy and not the mere setting down of a symptom as a disease which of course gives no information whatever as to the cause of death of the child,

We may assign about 50 per cent. of deaths registered as due to Convulsions, to some digestive disturbance, associated with wrong feeding or over feeding, a certain proportion of the remainder, are accounted for by developemental defects of the central nervous systems or injuries at birth, and a still further proportion are probably due to the onset of one or other of the acute specific infections such as Pneumonia, Scarlet Fever, Measles, &c. Still it leaves us with so large a proportion of deaths assigned to Convulsions as properly belonging to disorder of the digestive organs, that I have included them amongst these diseases,

There is an apparent saving of four lives under this head, but for the reason given above I think this figure should be larger.

ZYMOTIC DISEASES.

	West	East	Sutton
Measles	2 ..	2 ..	0
Diphtheria	1 ..	0 ..	0

Last year 10 deaths occurred from Whooping Cough. There is therefore a saving of five lives under this head.

LUNG DISEASES.

	West	East	Sutton
Bronchitis	1 ..	3 ..	1
Pneumonia	1 ..	6 ..	1
Other Respiratory Diseases	0 ..	1 ..	0

Last year 13 deaths were included under this heading, consequently there is a loss of one life on last year's returns.

East Macclesfield, as usual, stands pre-eminent, having more than twice as many deaths of infants from lung diseases as all the rest of the town put together. This points to defective ventilation, damp subsoil, absence of sunlight. It may, I think, be assumed that the infants in East Macclesfield receive an equal amount of maternal care, with those born in West Macclesfield or Sutton. I am not aware that a larger proportion of married women are employed in East Macclesfield than in West Macclesfield or Sutton, nor that the standard of wages is lower in that quarter than elsewhere in the Town, consequently eliminating the personal factor it leaves us with the environment as the principal causative condition of East Macclesfield's unsatisfactory position in this important matter.

If in any particular quarter of a town poor, squalid, insanitary houses abound, the tendency is for the intemperate, the thriftless, the idle and worthless to drift thither, where rents are low, the company congenial.

Again, decent respectable people who can only earn a poor rate of wage will gravitate thither, attracted by the low rents. Such people being badly fed and scantily clad and insanitarily housed, produce feeble children who succumb in large numbers shortly after birth.

INFANTS AGES AT DEATH.

Of the 94 children who died under one year of age, 35 were under one month and 17 between one and two months. That is to say that 35 children died before ever their birth need have been registered, and therefore before any help, assistance or advice could be rendered to the mothers by the Ladies Public Health Society, who have taken in hand the work of supervising the infants of the Borough and who have accomplished an enormous amount of good, the value of which it is quite impossible to estimate and to whom the community are under a deep debt of gratitude. Still with a fatuous Act of Parliament which permits 42 days to elapse before a birth need be registered, much valuable time is lost and many lives sacrificed. Why Parliament in its wisdom, cannot draft a short amending Act reducing the time to 7 days, it is impossible to say. It is not a contentious matter and on the other hand it would not play to the gallery, and would not influence many votes.

Whilst this Report is in hand, the Health Committee of this Corporation decided to offer a sum of money to the Ladies Public Health Society, to be expended by them in paying for early information of births, one shilling to be paid to anyone giving the first information of a birth occurring in East Macclesfield within seven days of its occurrence.

PREMATURE BIRTHS.

West Macclesfield	East	Sutton
8 ..	8 ..	4

i.e. Over 20 per cent, of the total deaths under one year of age are certified to be due to premature birth, and I cannot but think that the employment of married women in factories and their contin-

uance at work almost up to the date of their confinement, is responsible for many premature births and also for the feeble condition of many of the children born.

In this connection the following table, taken from the last Census Report, showing the number of married women engaged in occupations, is of interest :—

	Females over 10 in oc- cupation.		Proportion per cent of married or widowed in occupation.	
	Total.	Married or widowed.		
Crewe.....	2994	.. 468	..	15.6
Dukinfield	3421	.. 933	..	27.2
Congleton	2196	.. 581	..	26.8
Stalybridge	6087	.. 1777	..	29.1
Hyde	7005	.. 2150	..	30.6
Macclesfield	8398	.. 2629	..	31.3

A woman should be enabled to stay at home for a month before and three months after her confinement.

FEEDING OF THE PROSPECTIVE AND NURSING MOTHERS.

If the mother is to suckle her child satisfactorily, it is necessary that she should be fed on nutritious food before and after confinement. In many cases this matter is little attended to, with the result that both mother and child suffer. It is not, I believe, so much the want of food as want of knowledge how to select and ability to cook suitable and economical foods. So often the mistake is made of imagining that the body is being nourished, while merely pleasing the appetite. Working mothers require to be taught that the cheapest sources of nutritious food to build up the body are skim milk, some form of fish—(e.g. herring or salt fish)—cheese, the cheaper cuts of meat, and if the digestion is good the pulses, whilst the most economical forms of fat are margarine and dripping. These articles are within the reach of almost everybody.

To the poorer classes of mothers, such knowledge is of special value. It must be remembered that of the wages which a working man receives fully 50 per cent **must** be spent on food alone, and that the poorer a man is, the larger is his proportionate expenditure on this item. And yet the pathetic thing is that it is just this class of the community whose food purchases are apt to be the most irrational. Surely there is here room for popular instruction.

THE REMEDY.—EDUCATE. EDUCATE.

Instruction given to the girls now attending our elementary schools in such subjects as household management, simple cooking, cleanliness, sick nursing, and the care and feeding of babies, will have its effect when these girls themselves become wives and the mothers of the coming generation. Such instruction should be simple, practical, matter-of-fact, and should be given under the conditions, and with the appliances, that the pupil is likely to meet with in after life. It is no good teaching the girl how much nitrogen her future husband must absorb in order that he may raise so many foot-tons in a given time. It should be enough that such a kind of food is nutritious and digestible; and that this method of cooking is economical, whilst that is wasteful and extravagant. And so in a few years when the pupil—now a girl—has a home to look after, a husband to cook for, and children to nurse and attend to, it may reasonably be hoped that the instruction she has received, and the habits she has formed, will all have their effect, and that such effect will be seen in the reduction of infantile mortality.

There are numerous cases of badly nourished women, in which on quitting the lying-in room, the breast milk dwindles or becomes impoverished. It is to such cases that the teaching of proper methods of feeding and modes of living would be one of the most powerful preventives of infantile mortality.

I do not think we direct sufficient effort to improving the mother's health. The Hygiene of the expectant and suckling mother cannot be taught to children in school, the wives and mothers, themselves must be taught. Medical men, midwives and maternity nurses, must learn and must teach. Advice to the expectant mother should be as important as advice on the infant.

I do not know that the promiscuous distribution of leaflets on hand feeding is free from danger in this matter. It seems as though we began at the wrong end and that we ought rather to advise and insist on the cultivation of breast feeding, and I suggest that the Health Committee should issue leaflets containing advice to expectant as well as suckling mothers. I believe this matter is very important and commend it to the careful consideration of the Ladies' of our Public Health Society.

Total number of deaths from all forms of Tuberculosis	6)
Number of deaths from Phthisis (Pulmonary Tuberculosis) ..	51
" " " Tabes Mesenterica	5
" " " Tuberculous Meningitis	5
" " " General Tuberculosis	8
Death rate per 1,000 of population from all forms of Tuberculosis..	1.9
" " " " last year..	1.8
Death rate per 1,000 of population from Phthisis	1.4

DISTRICT MORTALITY.

	West Macclesfield	East Macclesfield	Sutton
Phthisis	16	27	8
Tabes Mesenterica	5	0	0
Tuberculous Meningitis	1	3	1
General Tuberculosis	3	4	1
	—	—	—
	25	34	10
	—	—	—
Totals 1905	31	25	10
Death rate per 1,000 of population			
1906	1.4	2.7	2.0
Death rate from Phthisis 1906.....	0.9	2.1	1.6

VOLUNTARY NOTIFICATIONS OF PHTHISIS.

The voluntary notification of Phthisis has been in force in the Borough since September 1902.

I have always urged and I am now freely convinced that voluntary notification is a half-hearted policy, and the results justify this opinion. Some Medical men notify casually, others never notify, consequently those who do notify are to some extent placed at a disadvantage. Without notification, we cannot cope with the inroads of this disease, and one of the most urgent sanitary needs in the interest of the working classes, especially, is a system of compulsory notification of Pulmonary Tuberculosis. On this matter, I feel very strongly, because Consumption is causing more deaths, suffering and sickness, it is pauperising more people, and it is causing a greater drain on the finances of Provident and Sick Benefit Societies, than all the other infectious diseases put together, and yet in dealing with it we adopt a milk and water policy and do little or nothing, except trust that something will "turn up."

No. of cases voluntarily notified in 1906	23
Males	13
Females	10

In 7 of these cases on inquiry evidence of direct infection from a previous case was obtained.

5 had lived with or had frequently visited consumptives.
Two had worked with consumptives.

Number of notifications received since 1902 :—

Year.	No. of Notifications.
1903	99
1904	48
1905	59
1906	23

It may I think be truly said that voluntary notification is not a success. It is difficult to believe that the medical practitioners are not impressed with the importance of endeavouring to stamp out this disease, but still it must be admitted that only 23 notifications indicates a supineness in seconding the efforts of the Health Committee.

Of the 51 deaths from Pulmonary Tuberculosis, only 7 had been previously notified. I suggest that an appeal should be made by the Health Committee to the Medical practitioners of the Borough calling their attention to the necessity for notifications. In no case is a visit paid by an Official from the Health Office, where the doctor notifying expresses a wish to the contrary and undertakes to instruct the persons in charge of the patient as to the best methods of preventing infection spreading.

AVERAGE AGE AT DEATH OF CONSUMPTIVES.

Of the 51 persons who died from Consumption, the average age was 39 years.

28 men and 23 women died therefrom in 1906.
The average age of the 28 men was 41 years.
The average age of the 23 women was 37 years.

Almost all were wage earners of the working classes, married and with families, and it is truly pitiable to think of the suffering, loss, distress and finally death, which these 51 cases represent. In almost every case the sufferer will have been ill for 3, 4 or 5 years, requiring extra nourishment, gradually becoming feebler and less and less able to work until finally bedridden after, perhaps months of suffering, death mercifully closes the scene.

And all this is preventable. Tuberculosis causes more deaths, many times over than all the other infectious diseases put together, and yet how little we do to prevent it.

The County Council have enquired whether we are willing to contribute towards the support of a County Sanatorium, and the Health Committee have replied that they would favourably consider any proposals for one. I do not see why we cannot use our Small-pox hospital for such cases as are from their surroundings and from the nature of the case a danger to the family and rest of community amongst whom they dwell. The hospital is not likely to be required and we have a nursing staff which with some help might very well undertake 8 or 10 cases of Phthisis.

Again why should not the General Infirmary be subsidised to take suitable cases and one or two small chalets made of wood be erected on the vacant land around the Infirmary. Surely this is such work as the Institution was founded for. It is not fair to treat advanced cases of Phthisis in the general wards, but small shelters can be erected in the grounds for about £20 to £30 each, which would serve to house the cases of Phthisis.

I think the Sick Clubs, Burial Societies, Trades Unions ought to rouse themselves in this matter. It is pre-eminently a workers question and the workers must help to solve it.

In Germany, numerous Sanatoriums have been established by the help of the various Friendly Societies and why cannot something of the sort be done here. We pay hundreds of pounds annually to ensure a decent burial why not pay something to insure recovery from disease and adequate provision for those who are dependent on the wage earner whilst undergoing the process of cure. The details would require to be carefully worked out but a practical scheme is possible and ought to be initiated.

“ God helps those who help themselves.”

THE ZYMOTIC DISEASES.

The seven principal Zymotic Diseases are :—

- (1). Smallpox.
- (2). Measles.
- (3). Scarlet Fever or Scarlatina.
- (4). Whooping Cough..
- (5). Diphtheria & Membranous Croup.
- (6). Fevers. Typhoid & Typhus.
- (7). Zymotic or Summer Diarrhœa.

The total number of deaths from these diseases during the year 1906, was 52 as against 56 in 1905.

Zymotic death rate per 1,000 of population.....	1.5
„ „ „ „ England and Wales	1.7
„ „ „ „ 76 Great Towns	2.2
„ „ „ „ 141 Smaller Towns	1.7
„ „ „ „ The Borough last year	1.6

The following table shows the deaths attributed to these diseases during the year as compared with the previous three years :—

Diseases.	Years.		
	1906	1905	1904
Small-pox	0 ..	1 ..	3
Measles	6 ..	1 ..	36
Scarlet Fever	12 ..	7 ..	0
Diphtheria	7 ..	6 ..	2
Whooping Cough	0 ..	18 ..	13
Typhoid Fever	1 ..	0 ..	2
Zymotic Diarrhœa	26 ..	23 ..	24
	—	—	—
Totals	52	56	80
	—	—	—

Zymotic death rates since 1874 with quinquennial averages :—

Years	Death rate from the Seven Zymotic Diseases.		Death rate from the Seven Zymotic Diseases.	
1874	2.5	1892	..... 1.1
1875	2.4	1893	..... 1.6
1876	6.0	1894	..... 1.9 2.18
1877	2.1	1895	..... 3.1
1878	2.3	1896	..... 3.2
1879	1.7 2.12	1897	..... 3.2
1880	1.1	1898	..... 1.8
1881	3.4	1899	..... 2.6 2.20
A 1882	3.0	1900	..... 1.8
1883	2.3	1901	..... 1.6
1884	2.2 2.04	C 1902	..... 0.3
1885	0.8	1903	..... 0.9
1886	1.9	1904	..... 2.3 1.32
1887	3.2		
B 1888	1.4	1905	..... 1.6
1889	3.0 2.02	1906	..... 1.5
1890	1.4		
1891	1.1		

A—Compulsory Notification came into force.

B—Isolation Hospital Opened.

C—Isolation Hospital Enlarged and Improved.

The marked decline during the last five years is striking and synchronises with the enlargement and improvement in our Isolation Hospital. But I do not claim the whole of the credit for the improvement on this ground, inasmuch as only four out of the seven Zymotic diseases are dealt with therein. I think it is equally noteworthy that the Ladies Public Health Society has been at work since 1903, and to their efforts must be ascribed some of the diminution in the number of deaths from the Zymotic diseases. If the Educational Authority will only afford us equal help in face of epidemic Measles and Whooping Cough, I believe we could still further reduce this death-rate.

This is not a bad record when we bear in mind the fact, that we have had an extensive outbreak of Scarlet Fever and that the summer was an exceptionally fine and warm one, when epidemic Diarrhoea of a fatal type is prone to make its appearance.

The time is coming round when we may begin to look forward to another invasion of Measles, and it will be curiously interesting to observe the way in which the disease will attack the young children, now that infants under four years of age are excluded from school probably we shall now find that the children at ages 4 to six years will be infected firstly through school influence and will in turn convey it home to the younger children. I shall make a careful study of this phenomenon. Under the head of Diarrhœa I have included deaths certified from Enteritis, Gastro-Enteritis, &c. These are vague phrases and only confuse the result. It has been suggested by the Royal College of Physicians that the terms Zymotic or epidemic Diarrhœa, should be used instead of Gastro-Enteritis, &c., this applies particularly to the cases of deaths of young children under 1 or 2 years of age.

DISTRICT ZYMOTIC DEATH RATE.

	West Macclesfield.		East Macclesfield.		Sutton.
Small-pox	0	..	0	..	0
Measles	2	..	3	..	1
Scarlet Fever	6	..	6	..	0
Diphtheria	3	..	4	..	0
Whooping Cough ..	0	..	0	..	0
Enteric Fever	0	..	0	..	1
Diarrhœa	7	..	11	..	8
	—		—		—
Totals	18	..	24	..	10
	—		—		—
Zymotic death-rate per 1,000 of pop- ulation	1.04	..	1.92	..	2.04
Last year	1.5	..	1.6	..	1.6
1904	2.0	..	2.0	..	1.6

QUARTERLY ZYMOTIC DEATH RATE.

	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter
West Macclesfield	0	..	2	..	9	..	7
East Macclesfield	2	..	5	..	15	..	2
Sutton	1	..	1	..	7	..	1
	—		—		—		—
Totals ..	3	..	8	..	31	..	10
	—		—		—		—

The increased mortality during the 3rd and 4th quarters affected infants principally and was ascribed to Diarrhœal diseases, which become prevalent when the warmer weather of July, August, September and early October produces conditions favourable to putrescence of food and decomposition of organic matter. The presence of decomposing filth at this season of the year favours the growth of the house-fly which readily conveys unmentionable filth from its haunts to food. In short it may be asserted that where there are many house-flies there or thereabouts is some accumulated filth, either a dirty house or privy-midden or accumulation of horse manure, &c.

Where the house-fly is found abundantly there the conditions prevail which give rise to Diarrhœa, and high infantile mortality.

The presence too of the common house-fly in excessive numbers is an absolute indication of defective sanitary surroundings. I have seen them in dirty-houses and neighbourhoods hanging in loathsome masses around the mouths of children dying of Summer diarrhœa.

DIARRHŒA.

Number of deaths from Zymotic Diarrhœa	26
„ „ „ „ last year	22

18 were under 1 year of age.
 3 under 1 month of age
 3 were 1 to 2 months of age.
 5 were 2 to 6 months of age.
 7 were 6 to 12 months of age.
 3 were between 1 and 5 years of age.
 5 were over 65 years of age.

I have indicated above some of the conditions giving rise to fatal Diarrhœa. I am absolutely convinced that when we have relieved ourselves of the privy-middens, and places where filth is accumulated, we shall materially reduce the death and sickness rate from Diarrhœa.

I have again to suggest certain measures which should be taken to check the spread of this disease, and which will in addition improve the health of the people generally, they are as follows :—

1. Special effort should be made to provide a clean and wholesome milk supply. I am not satisfied that sufficient is done in this

direction. Greater cleanliness of hands, clothing and person of the milker and milk vendor is required in many cases. The cows also require more cleanly treatment than many at present receive. The flanks grooming, the cows udder washing before milking, &c.

2. Education of girls of the poorer class in the cleanliness, and in the requirements of children, is of capital importance; some knowledge of infant feeding, and of the signs of illness in infants is necessary.

3. Female teachers should receive practical training in these subjects.

4. All yards and passages should be kept clean, especially where houses are crowded on space. It is essential for the attainment of this object that water-closets should be substituted for pails and middens, and that passages and yards should be truly levelled, well drained, and well paved.

5. A study of the house-fly is needed, and pains should be taken to reduce the numbers produced and the numbers inside houses. To reduce the numbers outside it would be necessary to carry out the changes mentioned under (4); to provide horse-manure receptacles inaccessible to flies; and to so store, as far as practicable, all collections of manure, refuse, and decaying vegetables, that they could not serve as breeding grounds for flies.

It would also be necessary to insist on cleanliness in the home, in the sense of tidiness.

6. Householders should be educated not to allow their infants to come into intimate relation with any person suffering from Diarrhœa, and to take special precautions when Diarrhœa has invaded the household.

Although Diarrhœa specially suggests the above precautions, they are applicable also in the prevention of other fatal diseases.

DISTRICT DIARRHŒA DEATH RATES.

Quarter ending.	Mar.	June	Sept.	Dec.	Total
West Macclesfield	0 ..	0 ..	6 ..	1 ..	7
East Macclesfield	1 ..	2 ..	7 ..	1 ..	11
Sutton	1 ..	0 ..	6 ..	0 ..	8
Totals	2 ..	2 ..	19 ..	2 ..	26
Last year	0 ..	1 ..	17 ..	4 ..	22

MEASLES.

Number of deaths from Measles	6
„ „ „ „ last year	1

4 were under 1 year of age.

All between 6 and 12 months.

2 were between 1 and 5 years of age.

MEASLES.

Number of deaths from Measles :—

Quarter Age Periods.	1st		2nd		3rd		4th		Total
	Under 1 yr.	1 to 5	Under 1 yr.	1 to 5	Under 1 yr.	1 to 5	Under 1 yr.	1 to 5	
West Macclesfield	0	0	0	0	1	0	1	0	2
East Macclesfield	0	0	0	0	2	1	0	0	3
Sutton	0	0	0	1	0	0	0	0	1
Totals	0	0	0	1	3	1	1	0	6

It will be noted that though Measles was not epidemic, it caused as many deaths in the year as Diphtheria, and half as many as Scarlet Fever. I consider Measles and Whooping Cough, two of the greatest scourges which afflict children under five years of age and both are largely spread by school attendance and made much worse where the classes, rooms are ill-ventilated, crowded and insanitary.

WHOOPING COUGH.

There were no deaths ascribed to this disease during the year, as against 18 in the previous year.

CANCER.

Under the head of Cancer, I have included deaths from Carcinoma and Sarcoma.

Number of deaths from Cancer	1906	.....	36
„ „ „ „ „	1905	.....	53
„ „ „ „ „	1904	.....	37
„ „ „ „ „	1903	.....	36
„ „ „ „ „	1902	.....	29

CANCER DEATH RATES.

Quarters Age Periods.	1st		2nd		3rd		4th		Totals
	25 to 65	over 65	25 to 65	over 65	25 to 65	over 65	25 to 65	over 65	
West Macclesfield	0	0	2	2	2	3	2	3	14
East Macclesfield	0	1	5	2	4	3	2	2	19
Sutton	0	0	1	1	0	0	1	0	3
Totals.....	0	1	8	5	6	6	5	5	36

DISTRICT CANCER DEATH RATES PER 1,000 OF INHABITANTS.

District.	Year 1906	Year 1905
West	0.8	1.5
East	1.5	1.3
Sutton	0.6	1.6

I have not noted any special distribution of the disease, nor any tendency for cases to recur in certain houses. Still it certainly seems desirable that the room, bedding, &c., of a sufferer from cancer, should be disinfected before being used by another person. The death-rate has not declined in East Macclesfield, proportionately, to the rest of the town.

SCHOOL HYGIENE AND SCHOOL CLOSURE.

I do not propose to recapitulate the results of the closure of schools which will be found in the Special Report on Scarlet Fever,

incorporated herewith. There are however one or two matters which I believe it my duty to call the attention of the Town Council to.

(1). The great necessity for regular and systematic inspection of the scholars in the public Elementary Schools. Whilst visiting the schools during the Scarlet Fever epidemic, I was forcibly struck by the number of children who were suffering from some physical defect, usually of sight and hearing, which materially interfered with their deriving benefit from the instruction which they were forced to attend and attempt to assimilate. It is positive cruelty to force a child whose sight or hearing is defective, or who is mentally deficient to attend classes intended for children whose senses and intelligence are normal.

(2). I have to call the attention of the Town Council to the inadequate sanitary provisions of some of the Schools. The facilities for washing in many cases are most meagre and should receive early attention. I desire specially to mention the inadequate provision of soap and towels and proper lavatories.

Surely a School should provide an object lesson in the gospel of soap and water before teaching the capital of Siberia or the exact latitude and longitude of Kamschatka.

Teachers and scholars are in many cases badly provided in this respect. I could give details, but prefer to refrain for the present.

It seems that inspection of school premises is as urgently needed as inspection of school scholars and I shall take an early opportunity of reporting to the Sanitary Authority on this matter, since schools are for the purposes of the Public Health Act dwelling Houses.

SCHOOL ATTENDANCE OF INFANTS.

There is fortunately scarcely any difference of opinion on the importance for excluding young children from school. The mother's necessity must not be made the child's opportunity for acquiring disease. The child has an equal right to be considered, and no-one who knows anything about the subject disputes the fact that hygienically and educationally the school attendance of children under five years of age is a mistake. That the mothers have to go out to work, is a misfortune, but that does not justify exposing the child to risk of life or health.

The establishment of creches in individual streets or in connection with large mills under the care of skilled nurses, would help to solve the problem,

Solved it must be, but at the expense of the parents or community, not of the child.

The fact that by sending infants to school, they are “out of the way” of the parents and by their “attendance” earn some “grant” for the school can arouse nothing, but feelings of pity for the poor little creatures between the upper and nether millstones of parental neglect and educational greed.

THE NOTIFIABLE INFECTIOUS DISEASES.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

The Act requires that cases of Smallpox, Cholera, Diphtheria, Membranous Croup, Erysipelas, Scarlet Fever or Scarlatina, Typhoid or Enteric Fever, Typhus Fever, Relapsing, continued and Puerperal Fever shall be notified to the Medical Officer of Health.

(1). By the head of the household to which the patient belongs or in default any person in charge of or in attendance on the sufferer.

(2) Every Medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that such patient is suffering from an infectious disease to which this Act applies, send a certificate to the Medical Officer of Health.

NOTIFICATIONS IN MACCLESFIELD.

Year ending December, 1906.

Diseases.	Under					Over		Total
	1 year	1-5	5-15	15-25	25-65	65		
Scarlatina	3	115	255	14	7	0	394	
Diphtheria	1	8	9	2	0	0	20	
Membranous Croup ..	0	0	1	0	0	0	1	
Typhoid Fever	0	0	4	3	6	0	13	
Typhus Fever	0	0	0	0	1	0	1	
Puerperal Fever	0	0	0	1	0	0	1	
Erysipelas	0	3	0	1	23	1	28	
Totals	4	126	269	21	37	1	458	

NOTIFICATIONS IN MACCLESFIELD.

Year ending December, 1905.

Diseases.	Under				Over				Total
	1 year	1-5	5-15	15-25	25-65	65			
Smallpox	0 ..	0 ..	0 ..	1 ..	4 ..	1 ..			6
Scarlatina	0 ..	33 ..	65 ..	2 ..	3 ..	0 ..			103
Diphtheria	0 ..	11 ..	1 ..	0 ..	0 ..	0 ..			12
Membranous Croup	0 ..	2 ..	0 ..	0 ..	0 ..	0 ..			2
Typhoid Fever	0 ..	0 ..	4 ..	5 ..	4 ..	0 ..			13
Puerperal Fever	0 ..	0 ..	0 ..	1 ..	4 ..	0 ..			5
Erysipelas	1 ..	0 ..	3 ..	1 ..	22 ..	9 ..			36
Totals	1 ..	46 ..	73 ..	10 ..	37 ..	10 ..			177

NOTIFICATION BY MEDICAL CERTIFICATES SINCE 1886.

	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Typhoid Fever.	Continued Fever.	Puerperal Fever.	Totals.
1886	.... — ..	42 ..	2 ..	— ..	2 ..	19 ..	1 ..	— ..	66
1887	.... — ..	649 ..	8 ..	— ..	— ..	44 ..	8 ..	2 ..	711
1888	.... 9 ..	208 ..	2 ..	— ..	1 ..	19 ..	10 ..	2 ..	153
1889	.... — ..	144 ..	— ..	— ..	— ..	17 ..	12 ..	— ..	173
1890	.... — ..	98 ..	— ..	— ..	— ..	7 ..	2 ..	2 ..	109
1891	.... — ..	38 ..	2 ..	— ..	— ..	14 ..	1 ..	1 ..	56
1892	.... 1 ..	51 ..	2 ..	— ..	— ..	14 ..	3 ..	— ..	71
1893	.... 6 ..	250 ..	5 ..	— ..	— ..	13 ..	2 ..	— ..	277
1894	.... 4 ..	42 ..	5 ..	1 ..	..	17 ..	2 ..	6 ..	80
1895	.... — ..	31 ..	117 ..	22 ..	— ..	29 ..	— ..	1 ..	178
1896	.... — ..	28 ..	227 ..	— ..	— ..	22 ..	— ..	2 ..	280
1897	.... — ..	62 ..	36 ..	1 ..	— ..	36 ..	— ..	1 ..	135
1898	.... — ..	287 ..	20 ..	— ..	— ..	46 ..	— ..	— ..	353
1899	.... — ..	303 ..	14 ..	— ..	— ..	35 ..	— ..	1 ..	351
1900	.... 1 ..	50 ..	16 ..	— ..	— ..	62 ..	— ..	1 ..	156
1901	.... 1 ..	28 ..	24 ..	— ..	— ..	20 ..	— ..	1 ..	73
1902	.... — ..	126 ..	12 ..	2 ..	— ..	26 ..	— ..	5 ..	196
1903	.... 20 ..	141 ..	20 ..	— ..	— ..	21 ..	— ..	4 ..	282
1904	.... 49 ..	56 ..	7 ..	1 ..	— ..	12 ..	— ..	4 ..	176
1905	.... 6 ..	103 ..	12 ..	2 ..	— ..	13 ..	— ..	5 ..	177
1906	.... — ..	394 ..	20 ..	1 ..	1 ..	13 ..	— ..	1 ..	430

DISTRICT NOTIFICATIONS.

	West Macclesfield		East Macclesfield		Sutton
Diphtheria	8	..	10	..	2
Membranous Croup	1	..	0	..	0
Erysipelas	12	..	11	..	5
Scarlet Fever	169	..	171	..	54
Enteric Fever	8	..	4	..	1
Puerperal Fever	0	..	1	..	0
	—		—		—
Totals	198	..	198	..	62
	—		—		—
Notification rate per 1,000 of population	11.4	..	15.9	..	12.3
Last year	6.8	..	2.6	..	5.0

QUARTERLY NOTIFICATIONS.

NOTIFICATIONS.

For Quarter ending March 31st, 1906.

Diseases.	Under										Over		Total
	1 year		1-5		5-15		15-25		25-65		65		
Scarlatina	0	..	25	..	40	..	2	..	1	..	0	..	68
Diphtheria	0	..	1	..	4	..	0	..	0	..	0	..	5
Typhoid Fever ..	0	..	0	..	3	..	1	..	1	..	0	..	5
Puerperal Fever	0	..	0	..	0	..	1	..	0	..	0	..	1
Erysipelas	0	..	2	..	0	..	0	..	3	..	0	..	5
Totals ..	0	..	28	..	47	..	4	..	6	..	0	..	85

NOTIFICATIONS.

For Quarter ending June 30th, 1906.

Diseases.	Under										Over		Total
	1 year		1-5		5-15		15-25		25-65		65		
Scarlatina	1	..	22	..	54	..	4	..	2	..	0	..	83
Diphtheria	0	..	3	..	1	..	0	..	1	..	0	..	4
Typhoid Fever ..	0	..	0	..	0	..	0	..	0	..	0	..	1
Erysipelas	0	..	0	..	0	..	0	..	8	..	0	..	8
Totals ..	1	..	25	..	55	..	4	..	11	..	0	..	96

NOTIFICATIONS.

For Quarter ending September, 30th 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Scarlatina	1 ..	39 ..	77 ..	3 ..	2 ..	0 ..	122
Diphtheria	0 ..	1 ..	0 ..	1 ..	0 ..	0 ..	2
Membranous Croup	0 ..	0 ..	1 ..	0 ..	0 ..	0 ..	1
Typhoid Fever ..	0 ..	0 ..	1 ..	1 ..	2 ..	0 ..	4
Erysipelas	0 ..	0 ..	0 ..	1 ..	5 ..	1 ..	7
Totals ..	1 ..	40 ..	79 ..	6 ..	9 ..	1 ..	136

NOTIFICATIONS.

For Quarter ending, December 31st, 1906.

Diseases.	Under 1 year	1-5	5-15	15-25	25-65	Over 65	Total
Scarlatina	1 ..	29 ..	84 ..	5 ..	2 ..	0 ..	121
Diphtheria	1 ..	3 ..	4 ..	1 ..	0 ..	0 ..	9
Typhoid Fever ..	0 ..	0 ..	0 ..	1 ..	2 ..	0 ..	3
Erysipelas	0 ..	1 ..	0 ..	0 ..	7 ..	0 ..	8
Totals ..	2 ..	33 ..	88 ..	7 ..	11 ..	0 ..	141

SMALLPOX.

No cases of Smallpox were notified during the year.

TYPHUS FEVER.

A woman living in East Macclesfield was notified as suffering from Typhus Fever, but this turned out not to be the case, consequently nothing further was heard or done in the matter.

SCARLET FEVER.

Number of cases notified	394
" " " " last year	103
" " " deaths from Scarlet Fever	13
" " " " " " last year	6
Number of cases removed to Hospital	264
" " " " " last year	73
Percentage of cases notified removed to Hospital	67
" " " " " last year	71

Districts from which cases were removed to Hospital :—

West Macclesfield	109
East Macclesfield	111
Sutton	44

QUARTERLY NOTIFICATIONS.

68 cases were notified during 1st Quarter.

83	"	"	"	"	2nd	"
122	"	"	"	"	3rd	"
121	"	"	"	"	4th	"

DISTRICT NOTIFICATIONS.

The cases occurred in the following Districts :—

West Macclesfield	169
East Macclesfield	171
Sutton	54

AGES AT WHICH THE DISEASE OCCURRED.

3 children were under 1 year of age.

115 children were between 1 and 5 years of age.

255 children were between 5 and 15 years of age.

The remainder were over these age periods.

About 45 per cent, of the attacks occur at ages under 5 years, 40 per cent. between 5 and 10 years, and 11 per cent. between 10 and fifteen years.

The severity of the attack diminishes as age increases. This lessened liability with increasing age is greater than can be accounted

for either by protection afforded by previous attack, or by diminished exposure to infection, Whitelegge says : “ There is, therefore, a double gain in shielding a child from Scarlet Fever during the first few years of his life. Every year of escape after the fifth leaves him less and less susceptible, until finally he becomes almost immune ; and secondly, if he should be attacked, every year that the attack is delayed reduces the danger to life, and also the risk of formidable complications that may become chronic and disabling if not immediately fatal.”

Year.	Number Notified.	Number Died.	Number removed to Hospital.	Fatality per cent.
1899	303	.. 9	.. 46	.. 2.9
1900	50	.. 1	.. 19	.. 2.0
1901	28	.. 0	.. 16	.. 0
1902	125	.. 1	.. 96	.. 0.8
1903	141	.. 9	.. 101	.. 6.3
1904	46	.. 0	.. 29	.. 0.8
1905	103	.. 6	.. 73	.. 5.8
1906	394	.. 13	.. 264	.. 3.2
Totals	1190	.. 39	.. 644	.. 2.7

SANITATION OF SCARLET FEVER HOUSES.

116 cases occurred in houses with clean water closets.
 19 “ “ “ “ “ waste water closets.
 246 “ “ “ “ “ privy midden closets.

Of these latter :

23 were wet and offensive.
 14 were delapidated or offensive.
 103 were offensive.

In 16 cases the drainage was defective.
 In 5 cases the house was overcrowded.
 In 1 case the house was very dirty.
 In 1 case the waste water closet was choked.

Children living under such bad sanitary surroundings are specially liable to acquire the infection and to develop the disease in a severe form. There is no evidence that bad sanitation can *de nova* originate the disease.

It is not a little startling to hear in certain quarters the assertion made that hospital isolation of Scarlet Fever is not "worth while" and it is still more amazing when one considers the evidence upon which such a statement is based. The value of an Isolation Hospital depends almost entirely upon two factors, firstly the possibility of isolating at the earliest moment all cases—mild as well as severe—likely from their surroundings and want of proper attention to spread the disease and secondly on the careful management supervision and classification of the patients received into the Hospital. The time, circumstances and conditions under which patients are discharged, should receive the most careful and minute scrutiny and there can be no doubt but that small badly administered Isolation Hospitals may do more harm than good. The main object of an Isolation Hospital should be to pick up the starters of the epidemic, but as many of these cases are mild and unrecognised owing to the diminished severity of Scarlet Fever during the last few years, such a course of procedure is rarely possible. The spread of the epidemic may therefore be said to betoken the failure of the hospital to carry out its prime object, the early isolation of the first cases. But this cannot be fairly laid against the hospital isolation of Scarlet Fever, as a general principle. The details of the epidemic will be found fully set out in the Special Report on Scarlet Fever, which is herewith appended. I can only repeat that the principal factor in the spread of the disease during the last twelve months has been the mild type which has generally prevailed, and has resulted in large numbers of unrecognised, misdiagnosed and undignosed cases spreading the disease in ever widening circles.

The isolation of such cases is of course impossible and hence the impotence of the present day sanitary measures to deal with the epidemic in a satisfactory fashion.

SCHOOLS AND SCARLET FEVER.

255 cases occurred in children attending the various schools, these were distributed as follows :—

	January, 1906.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Total number of cases notified	25	18	25	14	32	37	39	39	44	60	48	13	394
1 Beech Lane N. ....	..	1	..	2	..	..	..	..	..	..	1	..	4
2 Christ Church N.	2	..	1	3	4	3	3	..	..	8	3	1	28
3 Crompton Road N. ....	..	1	..	..	1	1	2	2	2	4	3	1	17
4 Lord Street B.	2	..	2	1	4	3	1	..	1	1	4	2	21
5 Mill Street Wes. ....	..	..	..	..	2	2	1	2	5	4	1	2	19
6 Old Church N.	4	4	2	..	1	4	..	5	..	2	..	..	22
7 St. Alban's R. C.	1	1	..	1	..	..	1	1	2	2	3	..	12
8 St. George's N.	1	2	1	..	2	2	2	1	2	4	6	..	23
9 St. George's Branch ....	..	..	..	..	..	..	1	..	4	1	..	..	6
10 St. John's N.	3	..	2	..	..	4	1	4	1	..	1	..	16
11 St. Paul's N. ....	..	6	1	2	3	3	6	3	3	5	5	1	38
12 St. Peter's N. ....	..	..	..	..	3	1	3	1	..	2	..	..	10
13 Hurdsfield (Church St.) ..	1	..	..	..	..	1	..	1	3	4	6	..	16
14 " Daybrook St. ....	..	..	..	..	1	..	3	3	4	3	1	4	19
Private Schools	2	..	..	..	..	..	..	..	1	1	..	..	4
Totals	16	15	9	9	21	24	24	23	28	41	34	11	255

DIPHTHERIA AND MEMBRANOUS CROUP.

Number of cases notified	21
„ „ „ last year	14
„ deaths „	7
„ „ „ last year	6
Number of cases removed to Hospital	4

Districts in which cases have occurred :—

West Macclesfield	9 cases 3 deaths.
East Macclesfield	10 „ 4 „
Sutton	1 case 0 „

It will be noted that the death rate per number of cases notified is very high, 7 out of 21 being fatal ones. I believe that Diphtheria is insidiously gaining a hold on the children of the town, and that parents, school teachers, &c. should keep a careful watch on all cases of sore throat. I would again point out that the Medical practitioners of the town are permitted to send specimen swabs from suspicious throats for skilled bacteriological examination, the outfit is provided free of cost and a telegram is sent to the practitioner notifying him of the result of the examination. There is therefore no excuse for the medical men of the town not availing themselves of up-to-date methods of diagnosis.

Again, the freer and earlier use of Diphtheria antitoxin in large doses—4,000 units at once—will materially reduce this high rate of mortality. In cases of emergency, a supply of antitoxin and the loan of a syringe can be obtained on application being made to the medical Officer of Health.

Swabs for examination, &c., can be obtained on application either to the Medical Officer of Health or at the Sanitary Office.

SANITARY CONDITION OF THE HOUSES IN WHICH
THE CASES HAVE OCCURRED.

4 cases were notified from houses in which were clean water closets.

17 cases occurred in houses with privy middens.

1 of these was defective.

7 of these were offensive.

2 of these was close to the house.

In one case the drainage was defective.

In one instance two cases were notified from the same house.

MEMBRANOUS CROUP.

The term Croup or Membranous Croup should be omitted from the list of notifiable infectious diseases.

All cases of Membranous Croup are now known to be due to the presence of the Klebs-Löffler bacillies in the larynx (Laryngeal Diphtheria) and it would be as well that it should be called by its proper name.

There is no more difference between Membranous Croup and Diphtheria than between Scarlet Fever and Scarlatina or Typhoid and Enteric Fever.

DIPHTHERIA AND MEMBRANOUS CROUP SINCE 1899.

Year.	Number Notified.	Number Died.	No. removed to Hospital.	Fatality per cent.
1899	14	0	0	0
1900	16	5	4	31
1901	24	3	7	12
1902	14	1	5	7
1903	20	3	7	15
1904	7	2	3	28
1905	14	6	3	42.8
1906	21	7	4	33.3
Totals ..	130	27	33	21.1

The fatality rate is probably even higher than the figures seem to indicate, as many of the cases notified Diphtheria or Membranous Croup were other diseases.

The freer and earlier use of anti-toxin will materially reduce this mortality.

65 Specimens were sent to the Lister Institute during the year. In 10 specimens the bacillus diphtheria was found. In 4 specimens the Pseudo diphtheria bacillus of Hoffman was found.

In one instance two specimens, one from the nose, the other from the throat, were taken from the same patient.

Pseudo diphtheria bacillus was found in the one from the nose, the one from the throat gave a negative result.

ENTERIC OR TYPHOID FEVER.

Number of cases notified	.....	13
„ „ „ last year	.....	13
„ deaths „	.....	1
„ „ „ last year	.....	0

None of the cases were removed to hospital.

The one fatal case was imported into the district from Gorton.

8 were notified from West Macclesfield.

4 were notified from East Macclesfield.

1 was notified from Sutton.

ENTERIC FEVER SINCE 1899.

Year.	Number Notified.	Number Died.	No. removal to Hospital.	Fatality per cent.
1899	35	4	7	—
1900	62	10	13	—
1901	33	2	11	—
1902	26	3	4	11
1903	21	3	0	44
1904	12	2	0	16
1905	13	0	0	0
1906	13	1	0	7
Totals	215	25	35	9.7

It would seem as if there was some close connection between the gradual diminution in the numbers of cases of enteric and the clearing out of the privy-midden system which has slowly been going on during the last few years. The following table bears this contention out:—

Year.	Number of Cases of Typhoid Fever.	Number of Privy-middens
1899	57 ..	3,942
1900	62 ..	3,862
1901	33 ..	3,825
1902	26 ..	3,705
1903	21 ..	3,569
1904	12 ..	3,387
1905	13 ..	3,222
1906	13 ..	3,053

During the last few years many of the worst privy-middens have been abolished and the policy is being gradually pursued.

SANITATION OF TYPHOID FEVER HOUSES.

4 cases occurred in houses with clean water closets.

In one of these, the back door of the house was near to, and opposite the offensive privy-midden of the adjoining property.

1 case occurred in house with a pail closet.

6 cases occurred in houses with privy-middens.

1 of which was wet and offensive, and 3 were offensive.

WIDAL REACTION.

16 Specimens were sent to the Lister Institute for examination, when enteric fever was suspected.

In 7 positive reaction was obtained.

In 1 a complete reaction was obtained.

In 1 a slight reaction was obtained.

In 7 no reaction was obtained.

The Institute now examine the blood against para-typhoid organisms of two strains. It thus renders the value of this test to the general practitioner much greater, as he has a means of diagnosing certainly typhoid fever from para-typhoid with which it has doubtless been confounded in the past. Many of the milder cases of supposed typhoid being really infection with the para-typhoid group of bacilli.

ERYSIPELAS.

Number of cases notified	28
Number of deaths	0
12 cases occurred in West Macclesfield.	
11 cases occurred in East Macclesfield.	
5 cases occurred in Sutton.	

I repeat what I have said in previous reports, that I quite fail to see what advantage to the Community it is that Erysipelas should be notified.

It is far more important that Measles, Whooping Cough or Pulmonary Tuberculosis should be so notified. It is a waste of time, and money, to notify Erysipelas, and the sooner some other disease is substituted for it, the sooner the gain to sanitary efficiency.

PEURPERAL FEVER.

Number of cases notified	1
Number of deaths	1

In Macclesfield, on receiving a notification of puerperal fever the Medical Officer of Health at once enquires into the case, and writes the midwife, requesting her to discontinue practice till she has submitted herself and her appliances to cleansing and disinfection. This is done at the Isolation Hospital.

No difficulty has been found in getting infected midwives to submit to this process.

Probably an increased amount of infection will be discovered now that a certified midwife will be required to notify to the local supervising authority any case upon which she is attending where after delivery the temperature rises to 100.4 degs. F., with quickening of the pulse for more than 24 hours.

ISOLATION AND SMALL-POX HOSPITALS.

The following were admitted during the year :—

Scarlet Fever	270 cases.
(Including one parent and five cases from Macclesfield Rural District).	
Diphtheria	4 cases.

Total 274

Last year 85 cases were treated.

DEATHS.

Scarlet Fever	7
4 at ages 1 to 5 ; 3 at ages 5 to 15.	

The following table shows the numbers admitted since 1899 :

Year	1900	1901	1902	1903	1904	1905	1906
Scarlet Fever	19	16	96	101	29	76	270
Diphtheria	4	7	5	8	3	3	4
Enteric Fever	14	11	4	0	0	0	0
Smallpox	0	0	1	22	52	6	0
Totals ..	Scarlet Fever.... 601						
	Diphtheria 34						
	Enteric Fever .. 29						
	Smallpox 81						

COST OF FOOD AND NURSING AT THE HOSPITAL.

The cost during the year has been as follows :—

	£	s	d
Groceries	137	17	3
Bread, &c.	40	15	0
Fish, Rabbits, &c.	37	16	8
Butchers Meat	141	12	5
Potatoes and Vegetables	20	19	5
Milk and Eggs	133	15	6
Total	£512	16	3

The patients, Nurses and Maids were in hospital 15,669 days. Consequently the total cost of food per head per day during the year, has been sevenpence halfpenny, as against $9\frac{1}{4}$ d. last year and 1/1 in 1904.

The cost of hiring Nurses amounts to the sum of £232 18s. 5d.

The amount you paid your own Nurses who were on duty the whole year was £170 11s. 0d. So that the expense of hiring Nurses far exceeded the cost of your own permanent staff.

It is thus obvious that the policy of hiring Nurses is bad, extravagant, and the most short-sighted it is possible to adopt.

It is good neither for the ratepayers, the patients, nor the hospital.

SCARLET FEVER.

265 cases were admitted from the Borough.

Seven of these died, giving a fatality rate of 2.5 per cent.

129 cases were treated at home, 5 of these died.

Giving a mortality rate of 3.8 per cent.

Hospital fatality—2.5 per cent.

Home fatality—3.8 per cent.

I think this is a very strong argument in favour of hospital treatment of Scarlet Fever.

I believe that it is exceedingly important to keep the severe septic cases of Scarlet Fever away from the mild and convalescent cases. I have repeatedly seen mild cases and convalescents re-infected from a severe case. It is most important that Scarlet Fever patients should be carefully classified and nursed in separate wards. Hence I strongly favour many small wards rather than one or two large wards. I do not think that more than 8 cases of Scarlet Fever ought to be nursed in any one ward and then only when each bed has at least 2,000 cubic feet of space and there are facilities for free ventilation. Severe septic and toxic cases do best when treated on the verandahs, in the open air, sheltered from draughts and chill.

Careful douching of nose and throat with some mild Alkaline antiseptic is always carried out and in toxic cases antistreptococcus serum is freely used.

RETURN CASES.

I have discussed the question of return cases of Scarlet Fever in the Special Report, and I do not propose to further deal with it here. The following notice is sent to the parent or guardian of every case admitted ;—

BOROUGH OF MACCLESFIELD.

Notice to Scarlet Fever Patient or Patient's Guardian.

Dated this.....day of.....190

Dear Madam,

Your are hereby notified that the removal to and treatment in the Borough Isolation Hospital of..... suffering from Scarlet Fever or Scarlatina, is undertaken only upon the distinct understanding that from the very nature of the disease the Corporation is totally unable to guarantee that the said..... will be absolutely free from infection at the time of discharge, and can in no way hold themselves responsible for the occurrence of any further cases of the same disease, or for the consequences of such disease. The utmost care will be taken during the stay of the above Patient at the Hospital, and on h..... discharge, to ensure against such an accident ; and on the back of this Notice you will find certain precautions set out which you are earnestly requested to observe when the patient returns home.

To..... Signed.....
Medical Superintendent.

.....

Precautions to be observed by Scarlet Fever Patients or Patients' Guardians on Patients returning home from Hospital.

No one can say with certainty how long Scarlet Fever may linger in the system, and therefore the following precautions should be most carefully carried out :—

1. Patients recently discharged from the Isolation Hospital should not be allowed to come into intimate contact with others for a week or ten days.

2. No person discharged from the Isolation Hospital should be allowed to sleep in the same bed as a healthy person, for at last a fortnight after discharge.

3. A short holiday in the country, with plenty of fresh air, and apart from children if possible, is desirable after Scarlet Fever.

4. All persons recently recovered from Scarlet Feves should be warmly clothed and protected from cold, especially about the chest and loins.

5. It is most important that any recently discharged Scarlet Fever Patient who complains of sore throat, sore nose, or sore ears, or a "running from the ear," or who has a breaking out or peeling of the skin, should be at once strictly isolated, and placed under the care of a medical man. The medical man should be informed of the nature of the recent illness.

COMPLICATIONS OF SCARLET FEVER.

13	cases	had	nasal	discharge.
14	„	„	ear	discharge.
5	„	„	nasal	and ear discharge.
3	„	„	post-scarlatinal	Rheumatism.
10	„	„	Cilbuminuria.	
10	„	„	enlarged	cervical glands.

Most of these complications occurred during the latter part of the third quarter of the year, and I believe were attributable in a large measure to overcrowding and insufficient classification, so that cross-infection took place. For this reason I discontinued taking cases into hospital, as I believe it is very detrimental to take cases of mild Scarlet Fever into a ward saturated with a severe type of the disease.

I can only repeat that I am fully convinced that abundance of fresh air and careful classification of the patients with avoidance of overcrowding is absolutely requisite to prevent the onset of complications and the occurrence of "return cases." At present it is quite impossible to say how long a Scarlet Fever patient who suffers from a running ear or nose is infectious. It is certain that many can, by or through such discharges convey the disease over long periods of time.

DIPHThERIA.

4 were admitted and notified as Diphtheria.
 3 were Scarlet Fever and not Diphtheria.
 No deaths occurred.

I can only point out the great importance of taking swabs from the nose and throats of all suspicious cases of Diphtheria. If only the medical men of the town would avail themselves more freely of the facilities provided free of cost, by the Corporation, many mistaken diagnoses would be avoided and much risk to life and incon-

venience to families would be done away with. All suspicious cases of Diphtheria receive 4,000 units of anti-toxin **at once** on admission into our hospital, we do not wait for the result of the bacteriological examination.

No case of true Diphtheria is discharged from hospital until three negative swabs have been taken from the nose and throat. In several cases Diphtheria bacilli have been found in the nose swab, when absent in the swab taken from the throat.

We always take swabs from nose and throat before concluding that a patient has not got diphtheria. Nasal Diphtheria is by no means uncommon, and occasionally the organism is found in the discharge from ears, occurring during and after Scarlet Fever.

HOSPITAL ADMINISTRATION.

During the year the Hospital Committee under the Chairmanship of Mr. Councillor Bailey, appointed a third probationer nurse. This brings our staff up to four and will materially reduce the expenditure on outside nursing. I am pleased to report that the Committee have carried out many much needed improvements, which will facilitate the treatment of the patients.

MACCLESFIELD RURAL DISTRICT COUNCIL AND BOLLINGTON URBAN DISTRICT COUNCIL.

This Authority although reserving four beds in our hospital, has made but scanty use of the accommodation provided and retained for them, only five cases being sent in from the Rural District during the year. The County Council have required the Urban District Council of Bollington to provide beds for Scarlet Fever patients and they have entered into an agreement with us to reserve four beds for their use in our hospital.

In addition the Macclesfield Rural District Council have been further required to provide accommodation for 14 patients, and they also have entered into any agreement with this Corporation to receive and treat that number of cases if necessary.

This, of course, necessitated the provision of extended accommodation and plans are being prepared for the erection of a single storey brick structure to contain 16 beds in two separate divisions of eight beds each, the eight beds being subdivided into two wards,

one of five beds and one of three beds. There will thus be four wards, two containing five beds each and two containing three beds each, the entire structure being so arranged as to permit of two kinds of infectious disease being treated therein, without risk of cross-infection. In addition arrangements have been made for the removal of the patients and the disinfection of the clothing, bedding, &c., in our steam disinfecter.

When this new block is finished, we shall have forty beds and five childrens cots for general infectious diseases, and twelve beds for Small-pox, the latter being situated in a separate block, a quarter of a mile from our general Isolation Hospital, and having separate nurses house, wash-house, &c.

SMALL-POX HOSPITAL.

This Hospital has fortunately not been required during the year, but it is kept in readiness and is periodically inspected by the Medical Officer of Health and Matron. During the height of the Scarlet Fever epidemic, it was most useful as a dormitory for the extra nurses required. It has been placed in telephonic communication with General Isolation Hospital and with the Town Hall and Medical Officer of Health.

PROVISION FOR SMALL-POX CONTACTS AND SUSPECTS.

The two cottages in Moss Lane, close to the Small-pox hospital, have been thoroughly altered and re-arranged so as to be quite suitable places for the temporary lodgment of contact and suspected cases of Small-pox. Two baths, hot and cold water, boiler for washing, &c., have been provided, so that we are fully prepared to repel an invasion of Smallpox, from which may we long be spared.

THE AMBULANCE.

I am more than pleased to report that we have purchased an up-to-date Brougham Ambulance from Wilson and Stockall, of Bury, the leading makers. This is a handsome, well-equipped and invaluable addition to our sanitary appliances.

DISINFECTION.

We remove infected bedding, clothing, &c., to our Disinfecter on the Moss, which is a Thresh Current Steam Disinfecter. Calcium

chloride solution is added to the water from which the steam is generated so that the water boils about 105° Centigrade. The steam thus generated continuously escapes through a chimney and the air is driven out of the fabrics by the constant inrush of superheated steam and more rapid penetration of solid substances ensured. The articles are subsequently dried by hot air being drawn into the disinfectors when the steam is turned off.

The following table shows the amount of material thus disinfected :

Number of beds disinfected by steam ..	993
Number of Pillows disinfected by Steam	1,337
Number of Carpets disinfected by Steam	198
Number of Blankets and Counterpanes disinfected by Steam	1,401
Number of articles of Clothing disinfected by Steam	8,095
Total	<hr/> 12,024 <hr/>

ROOM DISINFECTION.

The infected rooms are disinfected by spraying the walls, ceilings, &c., with a 5 per cent. solution of Formaline, which is a forty per cent. solution of formic aldehyde gas in water.

Formic aldehyde now ranks high as a rapid disinfectant and deodorant. The method of disinfection by burning sulphur, &c., has been shown over and over again to be unreliable and ridiculous. A consideration of the special Report on Scarlet Fever, appended herewith, will show that we have been singularly successful in preventing the further spread of infection in the households where a disinfection and removal to hospital have been **promptly** carried out. I have therefore every confidence in the use of the formaline spray.

SUPPLY OF DISINFECTANTS.

We distribute free "Chloros" and liquid hypochloride of lime and a carbolic acid preparation for purposes of disinfection so called.

The demands from the general public for these disinfectants, is enormous and out of all proportion to the necessities of the case.

I am convinced that scores of pounds are being poured down badly laid soughs, ill drained yards, defective privies in order to attempt to reduce the stench which arise therefrom, and are nature's danger signals and warnings that the drains need relaying or unstopping or the back yard needs repaving and swilling, or the privy "converting" and yet forsooth a bottle of disinfecting fluid is sent for and scattered about as though it was holy water or possessed some magic charm, when all it does is to substitute one stench for another and really makes bad worse.

Properly trapped well-laid drains, well-paved yards, kept clean and well swilled and scrubbed with clean water, need no "disinfecting," there should be nothing to "disinfect." Filth and dirt should be carried away and not lie in drains, soughs, privies, &c., and require "disinfecting" in order to make them tolerable.

I think it is quite time some check was placed on this indiscriminate distribution of stink cloaks and filth screens.

WATER SUPPLY.

The supply of water has been abundant and of good quality, during the year.

No cases of sickness have been traced to the use of polluted water.

I have again to repeat what I have said on many occasions, that one of the weakest spots in our water service is the unprotected condition of some of the water courses, which supply our storage reservoirs at Langley. I am of opinion that frequent inspections should be made of these streams, and precautions enforced to secure against pollution with fæcal matter. Such pollution may take place for years and pass unrecognised, until fæcal matter from a person suffering from typhoid fever gains entrance to the water when an uncontrollable epidemic at once ensues.

This was the experience of Maidstone in recent years, and should serve as a warning to other water Boards.

We have been singularly free from Enteric Fever during the year, and I trust that we may continue to be so. I am convinced that we need increased filtering accommodation. In the hot weather, the present filter beds are strained to their utmost, and any tendency to increase the rapidity of filtration by too frequent scraping of the

surface of the filter beds is to be strongly deprecated as by so doing the upper two or three inches of filtering material, which is produced by the growth of low forms of vegetable life in the sand, is removed and it takes several days before it is renewed. During this interval, there is great danger of insufficiently purified water being delivered to the town, with consequent risk to life and health. In proof of these statements I append the report of the Annual Inspection of the Waterworks by the Water Committee, on July 24th, 1906 ; confirmed by Council, September 5th, 1906.

“ The annual inspection of the waterworks was made commencing at the Round Fountain, which continues in excellent condition and to afford a good supply of the purest water, this portion of the work always evoking the admiration of new members of the Committee viewing it for the first time.

“ Passing on to the filter beds these were observed to be taxed up to their utmost capacity, and were constantly overworked, owing to the greatly increased consumption of water in the Borough. One filter was being skimmed and another was waiting to be cleaned. The top layer of sand that had been skimmed off the filters and stored was being cleaned and restacked, ready for relaying on the filters. The Service Reservoir was next inspected, and found to contain 8ft. 3in. of filtered water. Smoke deposits and scum were seen floating on the surface of the filtered water. During the frequent cleaning of the service reservoir, the filtered water was sent direct from the filters. The necessity for the covering in of the Service Reservoir was admitted to be urgent, and the Chairman explained the scheme as outlined in the minutes of the Sub-Committee with reference to dividing the Reservoir into two parts and covering in the same.

I consider the statement that the filters are “ constantly overworked ” is a very grave one, and demands the urgent consideration of the Health Authority. The responsibility for supplying water through filters which are admitted to be “ taxed up to the utmost capacity and constantly overworked ” is a very serious one hygienically and legally.

HOUSING OF THE WORKING CLASSES ACT 1890.

The following representations were made to the Town Council, through the Town Clerk in September.

PART II.

Nos. 3, 5, 7, 9 and 11 Nixon's Yard
 Nos. 12 and 14 Derby Street

are in a state so dangerous or injurious to health, as to be unfit for habitation.

On September 20th, the Health Committee resolved that notices be served on the owners of these houses, requiring them within one month from the service of the notice, to make said dwelling-houses fit for habitation.

OBSTRUCTIVE BUILDINGS.

Nos. 1 and 2 and an adjacent street in Court 1 Nixon's Yard and two empty houses at the rear of Nos. 26, 28 and 30 Nixon's Yard, and situate in Court 2 Exchange Street, continue to make other buildings to be in a condition dangerous or injurious to health.

The Health Committee resolved at the same meeting that the Borough Surveyor report to this Committee, respecting the circumstances of the buildings, and the cost of pulling down the buildings and acquiring the land.

DEMOLITION OF HOUSES.

No. 16 Derby Street, and Nos. 1, 2, 3, 4, 5, 6 and 7 Court 2 Derby Street, and No. 2 Court 1 Newgate, are in such a condition as to be dangerous or injurious to the health of the inhabitants of neighbouring dwelling-houses, and should be demolished. The Health Committee on September 20th, were of opinion that these houses could not be made reasonably capable for use as dwelling-houses, resolved that proceedings be taken forthwith to obtain a closing order.

Closing orders have since been obtained and half the Court right-hand side demolished. This was reported to the Health Committee, 7th March, 1907, as follows :—

The Town Clerk reported that in connection with the adjourned proceedings for obtaining closing orders with respect to property Nos. 5, 6 and 7 Court 2 Derby Street, the owners had almost completed the pulling down of the property, and that with respect to No.

16 Derby Street and Nos. 1, 2, 3 and 4 Court 2 Derby Street, the owner had consented to a closing order, and was making arrangements for the sale of the property, which would lead to its demolition.

A closing order was also obtained in respect of No. 2 Court 1 Newgate, which should be demolished, and the adjacent privy converted into a w.c. and dry ash place. The fate of the building in Nixon's Yard, reported as obstructive, had reached the following stage on February 7th, 1907.

The Borough Surveyor submitted a report on his examination of the old building at the entrance to Court No. 1 Nixon's Yard, stating that he does not consider it dangerous, when it was resolved that the Borough Surveyor's report on this property be accepted.

That the question of dealing with property Nos. 1 and 2, with adjacent shed in Court 1 Nixon's Yard, be deferred for consideration at a future meeting in order that the Sanitary Inspector (Mr. Jenkins) may interview Mr. Caulton, the adjoining owner, to see if he will agree to meet the Committee in any expense that may be incurred in taking off the upper storey of the shed at the back of his property in Nixon's Yard, and putting another roof thereon.

During the year a Committee called the Cleansing Sub-Committee has been appointed under the Chairmanship of Mr. Councillor Robert Brown, to this Committee has been assigned some of the most important and onerous duties connected with the sanitation, one of which is the dealing with single and insanitary houses. A list of "single" houses has been prepared, existing in East Macclesfield, and the Medical Officer of Health has been asked to report on these with a view to their being dealt with under the Housing of the Working Classes Act.

This will be done during the present year and will result in many unhealthy, insanitary, dirty and delapidated houses, being either improved or closed and demolished.

In East Macclesfield we have a large number of old delapidated houses, this is naturally the result of our being a very ancient town, but it is no gain either sanitarily or financially to keep them.

The class of people who inhabited these houses, which are rented very low, 1/8 and 2/- a week, being the average are of no value to any community, either through drink, idleness, shiftlessness or sheer

inability to raise themselves a little bit upwards in the world, they form a class always on the verge of pauperism, always ready to feel the first pinch of depressed trade and constituting in many cases a permanent drain on the Charities of the town and also on the poor rate.

Such a class want improving out of existence, or at least reducing to the irreducible minimum. Those towns which permit poor delapidated low rented property to exist in their midst, may surely count on becoming the depots for the helpless and unhelpable of other towns.

Granted that in a very few cases, an old man and woman may wish to retain their independence outside the workhouse and that such houses provide the means for so doing, this exception cannot be taken as the rule. The facts which are given above can be verified in any town, and should be an incentive to improve the dwellings of the people and thereby improve the dwellers.

“ DERELICT ” HOUSES.

There are a not inconsiderable number of houses which have condemned themselves.

Worn out by age and neglect, they have practically become a prey to wind and weather. These derelicts are a source of serious nuisance in various parts of the town.

Rubbish of all sorts is thrown into them, rats and vermin of all descriptions are the sole inhabitants. The only satisfactory way of dealing with such “ property ” is to obtain a closing order, and subsequently to follow this by a demolition order. It is not necessary for the property to be inhabited or even habitable in order to obtain a closing order against it.

I consider these “ derelict ” houses are a grave danger to the public health and that the sanitary authority should deal with them on the lines suggested.

Such property is peculiar to old towns, and necessitates very radical measures.

THE PRIVY MIDDEN.

I have once again to take up my parable against the privy-midden. For years I have urged that the abolition of this sanitary

abomination was the primary duty of a Sanitary Authority. The Local Government Board communicated with the Sanitary Authority in October, and expressed the hope that in future reports of the Medical Officer of Health, they would be able to find that more rapid progress had been made in the conversion of privy-middens into water closets.

Year.	No. of Privy Closets.	No. of Waste-water Closets.	No. of Clean-water Closets.
1897	4,319	.. 260	.. 674
1898	4,157	.. 301	.. 710
1899	3,942	.. 309	.. 815
1900	3,662	.. 309	.. 940
1901	3,825	.. 309	.. 1,038
1902	3,705	.. 309	.. 1,205
1903	3,569	.. 309	.. 1,378
1904	3,387	.. 309	.. 1,628
1905	3,222	.. 309	.. 1,838
1906	3,053	.. 309	.. 2,052

NUMBER OF PRIVY MIDDENS " CONVERTED."

Year.		
1906	169	
1905	165	Five yearly averages
1904	182	
1903	136	155.
1902	120	

Consequently at the present rate of progress it will take us 19 years before we see the last of these filthy relics " converted."

However, I believe there's a good time coming, the Cleansing Committee have set out to make much more rapid progress, and I believe they are fully convinced and converted to the necessity for providing much more rapidly. The owners of these abominations deserve no mercy, and it is false sentiment to temporise on a matter which so vitally affects the health of the community.

An attempt was made during the year to introduce the privy-midden system of a small scale, sometimes called the peat and pail system, but this quickly received its quietus. I append a report I furnished to the sanitary authority thereon.

I trust that next year I shall have to chronicle a very marked reduction in the number of privy-middens with a corresponding reduction in the amount of sickness and death, which are always associated with their baneful presence.

SCAVENGING AND NIGHTSOIL REMOVAL.

Year	No. of Loads.		Expenditure.		
			£	s	d
1888	10,338		821	18	7
1889	10,295		933	16	4
1890	8,523		847	13	9
1891	10,187		1,328	9	10
1892	9,957		1,521	8	6
1893	10,975		1,837	1	9
1894	12,733		1,714	15	8
1895	12,289		1,652	6	8
1896	12,407		1,807	12	6
1897	13,283		2,006	2	3
1898	13,619		2,104	2	4
1899	13,040		2,169	16	10
1900	12,057		2,093	10	0
1901	11,215		2,425	14	2
1902	12,532		2,334	10	9
1903	11,912		2,260	10	5
1904	10,371		1,999	6	4
1905	11,082		1,895	3	5
1906	11,885		1,841	9	1

The expenditure includes the cost of the Danes Moss Farm.

I am very pleased to say that whilst this Report was in hand the Cleansing Committee have decided to terminate the contract for getting out and removing the nightsoil and to undertake the work themselves.

This is very satisfactory from a health point of view.

In few places has contracting given satisfaction.

There is always a tendency to economise at the expense of inefficient cleansing and this can only be met by the Health Authority doing the work themselves. Expense in a matter of this sort ought to be a most secondary consideration. It is of first not second impor-

tance, that the town be kept clean. Such an obvious truism ought to be self-evident. If "economy" so called is to be the first consideration, then we may save the rates at the expense of the death rate, sickness rate and poor rate.

DRY ASH BINS.

I trust arrangements will be made for emptying these bins at least twice a week. Here again, I must point out that dry ash bins, filled partially with decomposing vegetable matter may become a serious nuisance, particularly during the warm weather.

Again, I find in many instances that though the dry ash places have been provided no bins with lids attached are supplied, and that consequently the ashes, garbage, &c., are thrown on the floor of the ash place. This is not complying with the notice of the Health Authority which requires that covered bins must be provided. I suggest that proceedings should be taken against persons not complying with the orders of the Health Committee in this important matter.

BACK YARDS.

The question of insanitary back yards is almost of equal importance with the privy-midden conversion, and I feel sure that members of the Cleansing Committee must have been struck with the appearance of many of the back yards, visited on their perambulation. Badly paved or not paved at all, broken flags, pools of sewage and waste water, yard gulleys broken or defective, slopstone pipes discharging into or on the house wall were found in many cases.

Again the tenants in some cases block up the limited space by building rabbit hutches, hen-pens, kennels, &c., and shut out the small amount of light and air which ought to gain access to the back of the house.

This is a most important matter and I trust that the Sanitary Authority will insist on the yards being properly paved and drained, and the removal of all erections which interfere with the free circulation of air at the back of dwelling-houses.

NEW SEWERS.

The following streets have been sewered during the year:—

March 15th.	Sewer behind Roe Street (Length 71 yds.)
March 29th.	Sewer behind Pickford Street (Length 92 yds.)

April 18th.	John Street (Length 113 yds.)
May 24th.	Coare Street Sewer (Length 48 yds.)
May 24th.	Acton Place Health Co. (Length 70 yds.)
Aug. 16th.	Pexall Road Sewer (Length 83 yds.)

It cannot be said that this is very rapid progress, as there are many streets needing sewerage in East Macclesfield, if the abominable privy-middens are to be replaced by water closets.

NEW HOUSES BUILT.

LIST OF PLANS PASSED IN 1906.

Date when Passed.	Owner.	Situation.	Description of Property.
Feb. 8th.	Mr. F. J. Jones	Chester Road	Two houses.
Jan. 25th.	The Equitable Provident Society	Parker Street	New bakehouse.
Feb. 8th.	Mr. S. Bull	Bond Street	Two houses.
Feb. 22nd	Mr. J. Wellings ..	Cottage Lane	Two houses.
Feb. 22nd	Mr. Wm. Boothby	Fountain Street	Two houses.
April 12th.	Mr. H. A. Ashton	London Road	New bakehouse.
April 19th.	Mr. John Clayton	Lyme Avenue	Two houses.
May 17th.	Messrs. W. A. Smith & Sons	King Edward St.	Cart Shed.
June 7th.	Mr. J. W. Clayton	Park Lane	Two houses.
June 7th.	Miss Willshaw	Bond Street	Two houses.
June 14th.	Mr. W. Burdin	Blakelow Road	Two houses.
July 12th.	Mrs. H. E. Bradburn	Park Lane	One house.
July 19th.	Mr. Samuel Brough	West Bond St.	Two houses.
Aug. 2nd	Millward & Wheeldon	New St. off High Street	Two houses.
Aug. 9th.	Mr. Geo. Rotherham	Lime Groove Fence Av.	Two houses.
Aug. 30th.	Messrs. Simpson & Son	Bond Street	Three houses.
Sept. 20th.	Mr. J. Turner	Whirley Road	Two houses.
Sept. 27th.	Education Committee	Fence Avenue	Girls School.
Sept. 27th.	Millward & Wheeldon	Newton Street	Two houses.

Summary :—

30 Houses.
2 Bakehouses.
1 Cart Shed.
1 Girls School.

I have the honour to be,
Gentlemen,

Your obedient Servant,

J. HEDLEY MARSH,

Medical Officer of Health.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

1.—INSPECTION.

(Including Inspections made by Sanitary Inspectors or
Inspectors of Nuisances).

Premises	No. of Inspections	No. of Written Notices	No. of Prosecutions
Factories (Including Factory Laundries)	5	..	1
Workshops (Including Work- shop Laundries)	110	..	—
Workplaces (Other than Out- workers' premises included in Part 3 of this Report) ..	—	..	—
Total	115	..	1

2.—DEFECTS FOUND.

Particulars.	Number of Defects.						
	Found.	Referred No. of Remedied to H.M. Prose- Inspector cutions.					
<hr/>							
Nuisances under the Public Health Acts :—*							
Want of cleanliness	3	..	3	..	—	..	—
Want of Ventilation	—	..	—	..	—	..	—
Overcrowding	—	..	—	..	—	..	—
Want of drainage of floors	—	..	—	..	—	..	—
Other Nuisances	—	..	—	..	—	..	—
Sanitary accommodation ; Part II of Public Health Acts, Amendment Act adopted as from 1st May 1891 :—							
Insufficient	—	..	—	..	—	..	—
unsuitable or defective	—	..	—	..	—	..	—
not separate for sexes	—	..	—	..	—	..	—
Offences under the Factory and Workshop Act :—							
Illegal occupation of underground bakehouse (s. 101)	2	..	—	..	—	..	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100).....	—	..	—	..	—	..	—
Other offences (Excluding offences relating to outwork which are included in Part 3 of this Report	—	..	—	..	—	..	—
Total	5	..	3	..	—	..	—
	<hr/>		<hr/>		<hr/>		<hr/>

* Including those specified in sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

3.—HOME WORK.

OUTWORKERS' LISTS, SECTION 107.

Lists received from Employers.			Numbers of Addresses of Outworkers received from other Councils
Once in the year.			
Lists	Outworkers		
Wearing Apparel :—			
	1	17	1
(1) making, &c.	1 } 3	25 } 88	
	1	46	

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Bread Bakers.....	20
Confectioners	10
Dressmakers	20
Milliners	17
Tailors	9
Silk Weavers	7
Clog Makers	6
Tin Plate Workers	6
Cabinet Makers	5
Brush Makers	3
Boot Makers	4
Stone Masons.....	3
Saddlers	3
Beer and Mineral Water Bottlers.....	2
Box Makers	2
Carriage Builders	2
Joiners.....	2
Knitting	2
Skipmakers	2
Wheelwrights	2
Builders	1
Copper Smith	1
Cycle Repairers	1
Marine Stores	1
Paper Stock	1
Rope Makers	1
Card Cutting	4
Total	137

5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133).	—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5).:—	
Notified by H.M. Inspector	—
Reports (of action taken) sent to H.M. Inspector	—
Other	

Underground Bakehouses (s. 101) :—

Certificates granted during the year	1
In use at the end of the year	3

April, 1907.

J. H. MARSH,

Medical Officer of Health.

SANITARY DEPARTMENT.

The following is a summary of the Sanitary Inspector's report :—

Number of Complaints received at Office	317
„ „ Nuisances entered on the Books	923
„ „ Nuisances removed	848
„ „ preliminary notices and letters	559
„ „ Statutory notices served	85
„ „ Magistrates orders obtained	6
„ „ Persons summoned before the Justices for offences under the Public Health Act	8
„ „ privies and ashpits repaired and improved	36
„ „ privies converted into water closets	169

Number of New closets built :—

	on W.C. system	45
	on Waste Water system	0
	on privy system	0
„	„ House drains repaired and cleansed	147
„	„ Slopstone pipes disconnected from the sewer	1
„	„ House drains tested with smoke apparatus	53
„	„ other nuisances (not specified above) abated	460
„	„ Visits paid to Common Lodging Houses	430
„	„ Nightly lodgers accommodated at the Common Lodging Houses	34,046
Number of Visits paid to Factories and Workshops.....		16
„	„ „ „ Dairies, Cowsheds and Milkshops ..	58
„	„ „ „ Registered Slaughter Houses	96
„	„ „ „ Bakehouses	90
„	„ „ „ Tripe dressing places	8
„	„ „ „ Dirty and overcrowded houses	62

The distribution of Lime-wash Brushes, and Disinfectants to the poor has been as follows :—

	Limewash	1,122
	Brushes lent for applying same	716
	Disinfectants	11,141
Number of Houses specially inspected on account of Infectious Diseases		394
„	„ Visits paid to same	1,321
„	„ Notices sent to schools and parents re the Isolation of children where infectious disease exists....	1,328
„	„ Notices sent to Librarian, Free Library.....	244
„	„ Pails containing Typhoid excrement, removed, dis- infected and buried	69
„	„ Supplies of Disinfectants specially on account of In- fectious Disease	874
„	„ Houses fumigated after Infectious Disease	403
„	„ „ „ „ „ deaths from Phthisis	12

Number of Cases removed to Isolation Hospital, including five				
	from the Rural District	.....		274
„	„ Beds	disinfected by steam	....	993
„	„ Pillows	„ „ „	....	1,337
„	„ Blankets and Counterpanes	„ „ „	....	1,401
„	„ Carpets	„ „ „	....	198
„	„ Articles of clothing	„ „ „	....	8,095
„	„ Canal Boats inspected	.....		47

Number of Samples taken under the Sale of Food and Drugs Act, &c., submitted to the Borough Analyst, viz. :—

19 Milk, 20 Butter, 17 Lard, 13 Cheese, 7 Coffee, 7 White Pepper, 7 Arrowroot, 2 Sugar, 2 Bread, Total 94.

Number of Persons proceeded against for offences under the				
	Sale of Food and Drugs Act	.....		0

The outbreaks of contagious diseases amongst animals within the Borough have been as follows :—

Swine Fever	2
-------------	-------	---

Number of persons proceeded against for offences under the				
	Contagious Diseases Animals Acts	.....		0

Diseased, Unsound, or Unwholesome food seized, and destroyed:
by Magistrates order :

Carcase of a Calf. Owner sentenced to one month's imprisonment.

Carcase of a Cow. Owner sentenced to three months' imprisonment.

Food submitted for inspection and destroyed :

25lbs. of Prawns, 16lbs. of Finnon Haddock, 9 Hams, 112lbs. of German Sausage, 20lbs. Lamb and 800lbs. of Beef.

Number of licenses certified for the removal of Swine				317
„	„ Notices issued for the detention of Swine	.....		2

TABLE I.
Name of District, Macclesfield. For whole District.

Year.	Popula- tion es- timated to Mid- dle of each Year. 2	Births.		Deaths under 1 Year of age.		Deaths at all Ages. Total.		Deaths in Public Insti- tutions	Deaths of Non- residents register- ed in District	Deaths of Resi- dents register- ed beyond District. 11	Deaths at all ages Nett.	
		Number 3	Rate* 4	Number 5	Rate per 1,000 Births register- ed. 6	Number 7	Rate* 8				Number 12	Rate* 13
1891	36009	1009	28.1	130	130	816	22.6	135	67		749	20.8
1892	36009	989	27.4	201	203	986	27.3	156	81		905	25.1
1893	36009	931	25.9	177	190	845	23.4	191	101		744	20.6
1894	36009	1017	28.2	136	134	732	20.3	160	89		643	17.7
1895	36009	917	25.4	199	217	908	25.2	182	95		813	22.5
1896	36009	964	26.8	150	55	732	20.3	150	67		665	18.4
1897	36009	977	27.1	171	157	825	22.9	179	93	2	734	20.3
1898	36009	953	26.1	166	174	787	21.0	151	88	1	670	18.6
1899	36009	886	24.6	174	196	810	22.5	188	73		737	20.4
1900	36009	853	23.6	163	190	772	21.4	160	66	3	709	19.7
Averages for years 1900—1901.	36009		26.6		174		22.9	163	82			
1901	34635	771	22.2	139	180	720	20.8	176	77	3	643	18.5
1902	34635	842	21.4	76	102	597	17.2	175	72	2	525	15.1
1903	34625	870	25.1	117	134	675	19.4	204	74	2	601	17.3
1904	34624	784	22.6	140	178	798	23.0	222	91		707	20.0
1905	34624	751	216	112	149	716	20.7	227	88	3	628	18.1
1906	34624	762	22.0	93	122	664	19.1	204	73	0	591	17.0

* Rates calculated per 1,000 of estimated population.

* Rates calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term “ Non-residents ” is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there ; and by the term “ Residents ” is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The “ Public Institutions ” to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.



Area of District in acres (exclusive of area covered by water	}	3,214	Total population at all ages	34,624	} At Census of 1901.
			Number of inhabited houses	8,534	
			Average number of persons per house	4	

TABLE II.
Name of District Macclesfield.

Names of Localities.	West Macclesfield.				East Macclesfield including Hudsfield since 1896.				Hudsfield.				Sutton.			
	Popula- tion es- timated to mid- dle of each year.	Births regis- tered.	Deaths at all Ages	Deaths under 1 year.	Popula- tion es- timated to mid- dle of each year.	Births regis- tered.	Deaths at all Ages.	Deaths under 1 year.	Popula- tion es- timated to mid- dle of each year.	Births regis- tered.	Deaths at all ages.	Deaths under 1 year.	Popula- tion es- timated to mid- dle of each year.	Births regis- tered.	Deaths at all Ages.	Deaths under 1 year.
Year.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1891	17854	447	398	61	9813	293	204	49	3282	111	44	3	5060	158	103	17
1892	17854	437	472	84	9813	298	213	64	3282	110	74	19	5060	144	146	34
1893	17854	427	415	74	9813	257	185	68	3282	111	57	17	5060	136	87	18
1894	17854	471	332	49	9813	284	160	49	3282	90	53	15	5060	166	98	20
1895	17854	433	421	98	9813	276	213	17	3282	74	67	15	5060	154	112	29
1896	17854	441	352	61	13095	375	242	67					5551	149	71	22
1897	17854	472	382	61	13095	378	261	71					5051	127	91	27
1898	17854	422	369	85	13095	383	225	61					5051	148	76	20
1899	17854	417	422	90	13095	341	213	57					5051	128	102	23
1900	17854	429	398	72	13095	305	224	68					5051	119	99	23
Averages of years 1891 to 1902.	17854	442	387	75		495	251	68						146	99	23
1901	17297	365	326	68	12450	283	214	44					4888	123	103	27
1902	17297	350	270	39	12450	300	196	31					4888	92	59	6
1903	17297	399	307	44	12440	357	240	61					4887	144	54	12
1904	17297	380	345	65	12440	284	264	54					4887	120	98	20
1905	17297	350	304	59	12440	286	225	38					4887	116	99	16
1906	17297	359	271	29	12440	279	255	50					4887	124	65	15

NOTES(a) The separate localities adopted for this table should be areas of which the populations are obtainable from the Census returns, such as wards, parishes, or groups of parishes, or registration sub-districts. Block I may, if desired, be used for the whole district; and blocks 2, 3, etc., or the several localities. In small districts without recognised divisions of known population this Table need not be filled up.

(b) Deaths of residents occurring in public institutions beyond the district are to be included in sub-column C of this table, and those of non-residents registered in public institutions in the district excluded. (See note on Table 1, as to meaning of terms "resident" and "non-resident.")

(c) Deaths of residents occurring in public institutions, whether within or without the district, are to be allotted to the respective localities according to the addresses of the deceased.

(d) Care should be taken that the gross totals of the several columns in this Table respectively equal the corresponding totals for the whole districts in Tables I. and IV.; thus, the totals of sub-column A, B, and C should agree with the figures for the year in the columns 2, 3, and 12, respectively, of Table I.; the gross total of the Sub-Columns C should agree with the total of column 2 in Table IV., and the gross total of sub-columns D with the figures in column 5 of Table I., and the total of column 3 in Table IV.

TABLE III.

Cases of Infectious Disease notified during the Year 1906. Name of District Macclesfield.

Notifiable Disease.	Cases notified in whole District.							Total cases notified in each locality.			No. of cases removed to Hospital from each locality.		
	At Ages*—Years.							1	2	3	1 West	2 East	3 Sutton
	At all Ages.	Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 & Upwds						
Diphtheria	20	1	8	9	2			8	10	2	2	2	
Membranous Croup ..	1				1			1					
Erysipelas.....	28	..	3	..	1	23	1	12	11	5	..	..	..
Scarlet Fever	394	3	115	255	14	7	..	169	171	54	109	111	44
Typhus Fever	1	..	..	..	..	1	..	..	1	..	..	..	..
Enteric Fever	13	..	..	4	3	6	..	8	4	1	..	..	..
Puerperal Fever	1	..	..	..	..	1	..	..	..	..	..	..	..
Totals ..	458	4	126	269	21	37	1	198	198	62	111	113	44

NOTES.—The localities adopted for this Table should be the same as those in Tables II. and IV.

State in space below the name of the Isolation hospital, if any, to which residents in the district, suffering from infectious disease, are usually sent. Mark (H) the locality in which it is situated or if not within the district, state where it is situated, and in what district. The name of the authority by whom the hospital is provided should also be given. Mark (W) the locality in which a workhouse is situated.

* These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by inquiry or otherwise, has obtained the necessary information.

'Isolation Hospital for Scarlet Fever, Diphtheria, &c., separate building in West Macclesfield for Small-pox.

INFANTILE MORTALITY DURING THE YEAR 1906.

Deaths from stated Causes in Weeks and Months under One Year of Age.

[illegible]

TABLE V.
BOROUGH OF MACCLESFIELD. (WEST).
INFANTILE MORTALITY DURING THE YEAR 1906.
Deaths from stated Causes in Weeks and Months under One Year of Age.

[illegible]

District (or sub-district) of West Macclesfield.

Births in the year: legitimate 334; illegitimate 25.

Population (Estimated to middle of 1906) 17,297.

Deaths from all causes at all ages 271.

INFANTILE MORTALITY DURING THE YEAR 1906.

Deaths from stated Causes in Weeks and Months under One Year of Age.

All Causes : Certified Uncertified		Deaths from stated Causes in Weeks and Months under One Year of Age.																Total Deaths under 1 year
		Under 1 week	1-2 Weeks	2-3 weeks	3-4 Weeks	Total under 1 Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	
Measles	.....	..	..	..	..	..	..	..	..	..	..	..	.1	..	..	.1	..	2
Diarrhoea, all forms	..	..	..	..	..	..	..	..	..	.1	..	..	..	..	..	..	..	1
Enteritis, Muco-enteritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
is Gastro-enteritis	..	..	..	.1	1	..	..	..	.1	..	.1	..	.2	.1	..	..	.1	7
Gastritis, Gastro-intestinal Catarrh	.....	..	..	..	.1	1	..	..	.1	..	..	..	..	..	..	..	..	..
Premature Birth	.. 1	.. 1	..	.3	5	3	..	..	..	..	..	..	..	..	..	..	..	2
Congenital Defects	.. 1	..	..	.1	2	..	..	..	..	..	..	..	..	..	..	..	..	8
Injury at Birth	.. 1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2
Atrophy, Debility,	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Marasmus	.. 2	..	..	..	2	..	..	..	.1	..	..	..	..	..	..	..	..	3
Syphilis	..	..	2	..	2	..	..	..	..	..	..	.1	..	..	..	..	..	3
Convulsions	.. 1	.1	.1	..	3	1	.1	.1	..	..	.2	..	..	.1	..	..	..	9
Bronchitis	..	..	..	..	1	.1	..	..	..	.1	..	..	..	..	.1	.1	..	4
Pneumonia	..	..	..	..	3	.1	..	..	..	..	..	..	..	..	.2	..	..	6
Other Causes	..	..	..	..	1	.1	.1	..	..	..	..	..	..	..	..	..	..	2
	6	2	3	6	17	9	3	3	3	2	2	3	3	1	3	2	2	50

District (or sub-division) of East Macclesfield.

Population (Estimated to middle of 1906 12,440.

Births in the year: legitimate 257; illegitimate 22.

Deaths from all Causes at all Ages 255.

TABLE V. BOROUGH OF MACCLESFIELD (SUTTON).

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INFANTILE MORTALITY DURING THE YEAR 1906.

Deaths from stated Causes in Weeks and Months under One Year of Age.

All Causes : Certified Uncertified	Deaths from stated Causes in Weeks and Months under One Year of Age.										Total Deaths under 1 year
	Under 1 week	2-3 Weeks	Total under 1 Month	1-2 Months	3-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months		
CAUSE OF DEATH											
Diarrhoea, all forms	..	.1	1	..	..	..	..	..	..	..	1
Enteritis, Muco-enteritis, Gastro-enteritis	..	..	..	..2	..	.1	..	..	.1	..	4
Premature Birth	...3	..	3	.1	..	..	..	..	..	..	4
Atrophy, Debility, Marasmus	..	..	..	1	.1	.1	..	..	..	..	1
Convulsions	..	..	..	..	..	.1	..	..	..	..	2
Bronchitis	..	..	..	..	..	..	..	.1	..	..	1
Pneumonia	..	..	..	..	..	.1	.1	..	..	..	2
	3	.. 1	4	.. 4	.. 1	3	.. 1	.. 1	.. 1	..	15

District (or sub-division) of Sutton.

Population (Estimated to middle of 1906) 4,887

Births in the year: legitimate 116; illegitimate 8.

Deaths from all Causes at all Ages 65.

APPENDIX

CONTAINING THE

Special Reports

MADE TO THE

HEALTH COMMITTEE,

DURING THE YEAR 1906,

. . . BY THE . . .

MEDICAL OFFICER OF HEALTH.



REPORT I.

. ON .

WATER CARRIAGE SYSTEM,

AS OPPOSED TO THE PAIL SYSTEM

OF DISPOSAL OF REFUSE.



REPORT II.

ON THE

SCARLET FEVER EPIDEMIC.

SPECIAL REPORT ON PAILS VERSUS WATER CLOSETS.

Town Hall,

Macclesfield,

December, 1906.

SIR,

In reply to your letter of yesterday's date, permit me to point out one or two facts, which should be kept carefully in mind by any Sanitary Authority when considering the best modern methods of disposing of the filth, garbage, slop and waste waters of a town.

One of the first obligations imposed on a Sanitary Authority and especially in cases of towns by Section 15 of the Public Health Act of 1875, is the **provision of sewers** for the effectual draining of their district. It not unfrequently happens that these are among the most onerous duties which a Sanitary Authority is called upon to perform and that they entail a serious expenditure in their fulfilment. Lest these considerations should in any case prevent Sanitary Authorities from providing their districts with such systems as are essential to the health of the inhabitants special legislative provision has been made for enforcing the performance of this work by defaulting Authorities. The Local Government Board may in such a case issue an order enforceable by mandamus, limiting a time for the carrying out by the Sanitary Authority of the necessary works.

It is thus obvious that a town or district must be effectually sewered.

The second point is the material with which such sewers may have to deal. In towns possessed of water closets the Sewers will have the faeces of the inhabitants, house waste waters, grease, soap and foul matters from the surface of the body and from clothes and general house washing and swilling. Sewage may also contain special pollution from manufacturing processes. Where human faecal matter is excluded from the sewers it is popularly supposed that the sewage is comparatively innocuous, but this is certainly not the case.

An estimate of the difference in the sewage of water closet towns and of towns where the faecal matter is dealt with by the pail system may be arrived at by comparing the value of the sewage as manure in each case.

According to the first Report of the Rivers Pollution Commissioners, the value for agricultural purposes of twelve tons of sewage from towns without water closets is equal to ten tons of sewage from towns with water closets.

It is clear that the pails deal only with a fraction of the waste matters of a community, and in the absence of sewers fail to deal with a liquid refuse of a highly polluting character, a liquid which causes the sewage of midden and pail towns to be little, if any, less impure than that of water closet towns and so a conservancy system (pail and midden) entirely fails to provide any sort of solution to the question of the **disposal** of sewage at the Outfall Works.

Dr. Reid, Medical Officer of Health for the County of Staffordshire, in his text book on "Practical Sanitation" says: "The water carriage system is now pretty generally admitted to be the better one, except perhaps in the case of scattered populations dependent for their water supply on local wells. The arguments in favour of the water carriage system seems unanswerable. There can be but little question that the water carriage system is the cleanest, most rapid, most convenient, and cheapest method of sewage removal."

Drs. Stevenson, Medical Adviser to Home Office, and Shirley Murphy (M.O.H. London), in their classical treatise on "Hygiene and Public Health" state, "The leading principle in the water-carriage system is to convey all excretal matters away from the house premises and subsequently from the town as quickly as flowing water will do it. This is the great contrast between the water carriage and all conservancy systems; but besides this it is evident that the force employed in water carriage costs nothing whereas the manual operations of scavenging in the conservancy systems are very costly." In Manchester, the pail system has had a long trial, and has been found unsatisfactory, so that water closets are now being substituted for the pails.

As to Macclesfield, it has been conclusively proved that if the whole of the privy-middens of the town were converted into clean W.C.'s it would add little or nothing to the difficulty of dealing with the Sewage, in fact the dilution of the Sewage by the clean water, facilitates bacteriological methods of purification, consequently it is of no advantage at the Butley Outfall Works to adopt any conservancy method.

As regards the sewers and drains in the town, if it is not effectually sewered and drained, it ought to be, and one of the first duties imposed on any Sanitary Authority is to carry this out.

Drains and Sewers are required for the waste waters which we have seen are as foul in a privy-midden and pail system town as in a water closeted town. The slop and waste waters must be turned into the sewers, the Mersey and Irwell Rivers Board will not permit them to be turned into the river. Even Congleton has had to provide an Elaborate Sewage Scheme and Works, therefore a proper system of sewers and drains must be provided whether the faecal matter is turned therein or stored in middens or pails.

In respect of the water supply, it is no exaggeration to say that probably there is enough water wasted in Macclesfield to supply all the W.C.'s which the town requires. Few people realise the immense amount of water which is wasted in almost every town. In Liverpool where the average amount daily supplied was $33\frac{1}{2}$ gallons, Deacon's waste water detectors were introduced and these, together with efficient inspection reduced the supply to 23 gallons, without any restriction being placed on the consumer.

At Shoreditch with a population of 87,000 the introduction of Waste detectors effected in course of three years a diminution of waste and undue consumption amounting to 720,000,000 gallons per annum or 23 gallons per head daily, again without any restriction on the consumer.

In London, in Bradford, in Exeter and elsewhere, where waste detectors have been introduced, the expenditure of water has been reduced from $\frac{1}{3}$ to $\frac{1}{2}$. In considering the influence on the health of a district of any system of sewage and refuse disposal, several factors have to be taken into consideration. It must be taken as an axiom that "quick removal of filth is the doctrine of modern Sanitation" consequently from the point of view of the public health which is the position occupied by a Sanitary Authority, all conservancy systems are based in a wrong principle.

Any system which requires that filth particularly human excreta, should be stored near a dwelling house will surely lend itself at lowering of health of those people whose unfortunate lot it may be to have to tolerate such a state of affairs and unfortunately this tells most against those most liable to suffer from defective sanitary arrangements and least able to protect themselves, that is young children. Adults suffer more or less from a condition of generally lowered vitality, but children and particularly infants, succumb in large numbers under such circumstances.

I would ask you most carefully to consider the relative position of the two towns of Macclesfield and Congleton. Macclesfield with a population of 34,634 and a density of population of 10.7 to the acre.

Congleton with a population of 10,500, and a density of only 4 persons to an acre. Apart from any other consideration whatever, from these statements two conclusions can at once be drawn by anyone who has but an acquaintance with the elements of sanitation.

Congleton with its much more scattered population, almost rural, certainly semi-urban character, ought to show with any fairly satisfactory sanitary provisions a much better health record than Macclesfield, with its larger population and its area more than twice as thickly populated.

A system of refuse and sewage disposal which would be tolerable in a rural area is quite out of place and a grave danger to health in an urban district. I contend from the first that the conditions in Congleton and Macclesfield are not comparable. Congleton is more comparable with Bollington, Middlewich and such towns, which have about a similar density of population.

I repeat that apart from any question of the influence of sewage disposal on the health of a district, the more sparsely scattered distribution of the people ought to materially modify the vital statistics in favour of Congleton. We ought in short to find that Congleton shows a marked improvement on Macclesfield, in respect of the numbers of deaths and amount of sickness, &c., from those diseases whose presence or absence are considered to indicate the healthiness or unhealthiness of a district.

I submit the following statistics compiled from the Annual Reports of the Medical Officer for the Cheshire County Council.

These figures are very suggestive and deserve most careful study. Infantile Mortality, Diarrhoea and Typhoid are safe guides when measuring the sanitary surroundings of any town or district.

CONGLETON.

POPULATION 10,706.

AREA 2,572 ACRES.

PERSONS TO AN ACRE 4.04.

		Zymotic No. of cases										No. of
		Death	Infantile		Death	of Enteric		Diarrhoea			Pails	
Year.		Rate.	Mortality		Rate.	Notified		death rate				
1901	..	21.3	..	190	..	2.4	..	3	..	2.0	..	1356
1902	..	16.0	..	129	..	0.6	..	25	..	0.09	..	1462
1903	..	14.5	..	94	..	0.3	..	5	..	0.1	..	1546
1904	..	19.6	..	190	..	1.0	..	6	..	0.8	..	1615
1905	..	17.1	..	184	..	1.3	..	3	..	0.3	..	1674
<hr/>												
Average for 5 years.		17.7	..	157	..	1.1	..	8	..	0.6	..	
						per 1000 of population		0.7				

One Pail to every 6 of population.

MACCLESFIELD.

POPULATION 34,624. AREA 3,214 ACRES.

PERSONS TO AN ACRE 10.77.

Year.	Death Rate.	Mortality Rate.	Infantile Death Rate.	Zymotic of Enteric Fever notified	No. of cases Diarrhœa Death Rate.	W.C's
1901 ..	18.5	.. 180	.. 1.6	.. 32	.. 0.7	.. 1038
1902 ..	15.0	.. 102	.. 0.3	.. 26	.. 0.3	.. 1205
1903 ..	17.3	.. 134	.. 0.8	.. 21	.. 0.5	.. 1378
1904 ..	20.4	.. 178	.. 2.3	.. 12	.. 0.6	.. 1628
1905 ..	18.1	.. 149	.. 1.6	.. 13	.. 0.8	.. 1838
Average for 5 years.	17.8	.. 148	.. 1.3	.. 20	.. 0.5	..
per 1000 of population 0.5						

One clean W.C. to every 18 of population.

	Total.	Females over 10 in occupation. married or widowed.	Proportion per cent of married or widowed in occupation.
Crewe	2994	.. 468	.. 15.6
Dukinfield	3421	.. 933	.. 27.2
Congleton	2196	.. 581	.. 26.8
Stalybridge	6087	.. 1777	.. 29.1
Hyde	7005	.. 2150	.. 30.6
Macclesfield	8398	.. 2629	.. 31.3
Last Census Returns.			

TO SUMMARISE THE OBJECTIONS TO THE WATER CARRIAGE SYSTEM.

(1) On the ground of absence of sewers.

This objection ought not to weigh with a Sanitary Authority. Its first duty is to provide sewers for the effectual draining of their district. Surely as the money can be borrowed for works of sewerage, it would be infinitely better to map out the unsewered or badly sewerred areas and gradually get the work done.

(2) On the ground of deficient water supply.

If a system of careful inspection is instituted and Deacon's waste water detectors installed in several districts in the town, it can be confidently asserted that we have more than enough water. Because we now waste an enormous quantity of water, can hardly be urged as an objection to an urgently needed Sanitary reform. The recent case of the township of Upton is of great interest in this connection. Some two years ago the water main through Upton was extended into Prestbury, and at the time, it was overhauled and found defective. The result now is that Upton and Prestbury combined, are only using as much water as was formerly used and **wasted** in Upton alone. This being the condition of a comparatively small extent of water main what must be the total waste on the much greater area of the Borough ?

(3) That Water Closets are abused by the users.

This objection can be met by inspection and as a matter of fact we receive few complaints of deliberate misuse of the water closets at present in use. It can only be in the cases of a few of the most ignorant, careless and slovenly people that abuse can arise, and surely these are not the class whose modes and habits of life should direct the Sanitary requirements of a district. It would be grossly unfair on the vast majority of their neighbours, were such to be the case. Ought we not rather to educate these people up, not level the rest down ? A few prosecutions would soon put a stop to misuse and abuse of water closets.

(4) That Congleton with its pails and peat is healthier than Macclesfield.

The statistics I have compiled show such is not the case. In fact Macclesfield is comparatively better than Congleton. Macclesfield employs a larger proportion of married women than Congleton, consequently the mothers can stay at home in larger numbers in Congleton and look after their children, yet Congleton with its sparser population and less female employments show a higher infantile mortality rate. This is a certain mark of defective sanitary control and may be safely laid at the door of defective refuse removal. Flies will breed in filth, whether mixed with peat moss or otherwise disguised, it is still filth, accumulated near dwelling houses and liable to spread pollution to food, milk, &c.

Lastly. Once introduce the pail system with its necessary appliances, its carts, its depot, its pails and its peat, &c., &c., and there must creep in a tendency to modify the policy of the Sanitary Authority in that direction. It is natural, because it is the path of least resistance, and with it will surely follow a deterioration of the public health.

Yours faithfully,

J. HEDLEY MARSH,

Medical Officer of Health.

Public Health Department,
Huddersfield.

December 19th, 1907.

MY DEAR SIR,

In reply to your enquiry :—

We have about 16,000 pails and about 6,000 water closets in Huddersfield, but they are not gathered together in one or another area, frequently a water closet stands next to a pail closet, so that I can not base any calculations on the bad influence of the latter on one area or another.

Nor does it seem to me open to question. I should say that all such enquiries are superfluous. The only difficulty I have in dealing with the subject is that it is so very simple,—that its very simplicity makes it difficult to explain; just as it is difficult to state in terms exactly why two and two make four.

The water carriage system removes “soil” immediately. A modern water closet is entirely without offence, the user is exposed to no foulness except such as he himself creates, and that only for a few brief moments. On the other hand a pail closet is a system for the accumulation of foulness in the vicinity of our dwellings, the user is compelled to place himself over a stinking, repulsive mass of filth, and he is compelled while he is there to breathe an atmosphere, the very contemplation of which is sufficient to make ones gorge rise. The common house fly passes readily across the short distance which usually intervenes between the kitchen and the pail closet battenning on the filth and on our food alike.

I could go on, but surely I have said enough.

I am,

Faithfully yours,

F. MOORE,

Medical Officer of Health.

Dr. J. Hedley Marsh,
Cumberland House,
Macclesfield.

Macclesfield,

December, 1906.

SIR

In accordance with the request of the Local Government Board, I beg to submit the following Report, on the Epidemic of Scarlet Fever, which has prevailed in the Borough during the last twelve months.

The period of time specially dealt with in this Report, extends from October 1st 1905 to November 30th 1906, a space of thirteen months.

The outstanding figures relating to the disease during that period, are as follows :—

Total Number of cases notified	454
„ „ deaths	16
„ „ cases Removed to Hospital ..	311

DISTRICTS IN WHICH THE CASES HAVE OCCURRED.

	cases.
West Macclesfield (population 17,297)	225
East Macclesfield (population 12,440)	168
Sutton (population 4,887).....	61

Of the 311 cases removed to Hospital, 152 were from West Macclesfield.

108	„	East	„
51	„	Sutton	„

ATTACK RATE PER 1,000 OF POPULATION.

West Macclesfield	East Macclesfield	Sutton
13.0	13.5	12.4

District.	No. of cases.	No. of Deaths.	Death rate of Pop'lotion per 1000	Case Fatality per cent.	Percentage removed to Hospital.
Macclesfield [The Borough]	454	16	0.04	3.5	68.7

SUB-DISTRICTS.

W. Macclesfield	225	9	0.5	4.0	67.5
E. „	168	7	0.5	4.1	64.2
Sutton	61	0	0	0	83.6

The following particulars relate to the fatal cases :—

TOTAL NUMBER OF FATAL CASES, 16.

Boys	10
Girls	6

AVERAGE AGE AT DEATH.

Boys	3 years and 9 months.
Girls	3 years and 10 months.
	8 cases died in Hospital (Isolation)
	1 case died in General Infirmary.
	7 cases died at home.

Of the cases treated at home, 4.8 per cent. died, and of the cases treated in our Isolation Hospital, 2.2 per cent. died. It will be noted that all the fatal cases were in young children, and that the cases treated in Hospital, show a much higher percentage of recoveries than cases treated at home. In fact, in the case of the Sutton District, where a high percentage of the cases were treated in Hospital, not a single death occurred. This speaks highly for the value of Hospital treatment of Scarlet Fever from the patient's point of view.

QUARTERLY STATISTICS.

	1905 4th Quarter	1906 1st Quarter	1906 2nd Quarter	1906 3rd Quarter	1906 4th Quarter Oct. and Nov. only
No. of Cases Notified	73	68	83	122	108
Percentage of cases removed to Hospital	75.3	76.4	79.3	74.5	46.2
Number of Deaths in Hospital	2	1	2	2	1
Number of Deaths outside Hospital	1	0	2	3	2

MONTHLY STATISTICS.

	[1905]			[1906]			
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
No. of Cases Notified....	17	30	26	25	18	25	14
No. of Cases removed to Hospital	14	18	23	15	13	24	12
No. of Deaths	1	1	1	1	0	0	0

	May	June	July	Aug.	Sept	Oct.	Nov.
No. of Cases Notified....	32	37	39	39	44	60	48
No. of Cases removed to Hospital	27	27	27	32	32	31	19
No. of Deaths	1	3	2	3	0	1	2

The accompanying chart shows that the greatest number of cases notified in any one week, occurred during the last week in September, when twenty fresh notifications were received.

The fatality rate was highest during the second quarter of 1906, reaching 4.8 per cent. of cases notified.

The decline in the percentage of cases removed to Hospital, during the third and part of the fourth quarters of 1906, is due to two causes.

FIRSTLY.—The rapid uprush in the number of cases overwhelmed our Hospital accommodation, with the Hospital full to overcrowding, it was obviously impossible to take in any more cases.

SECONDLY.—During the later half of October, I decided to diminish the numbers in Hospital, because I believe the large number treated in our limited accommodation without any intermission, had produced an intense and concentrated amount of infection in the Wards, &c., and consequently, I was of opinion, from careful observation of several cases that the mild cases of the disease ran some risk of contracting various septic manifestations, such as anginous sore throat, which they would probably have escaped, had they not been exposed to the infection.

The wards passages needed complete emptying and flushing with plenty of fresh air. In short, the place needed a

rest. Had we been possessed of more extensive accommodation, there were 30 or 40 cases which could have been removed to Hospital. However, some we could not take, and others later on in the epidemic, it seemed undesirable to remove in the interest of the patient.

SCHOOLS AND SCARLET FEVER.

In considering the important influence which school attendance has exerted, on the spread of Scarlet Fever, the following Statistics must be kept in mind.

There are 15 Public Elementary Schools in the Borough, all have had a certain number of their scholars affected, excepting Broken Cross, which is situated on the outskirts of the town, about a mile and a half from the town, and which constitutes a community to itself, and has not shared in this epidemic. The following table shows the schools with the average attendance in the different departments :—

School.	Depart- ment.	Average Attend- ance Last School Year.	Average Attend- ance Three weeks ended 21st Sept. 1906.
Broken Cross	M	63	65
"	I	25	31
Christ Church	B	187	185
"	G	200	188
"	I	120	112
Crompton Road	M	212	174
"	I	107	124
Hurdsfield (Church St.)....	G	185	155
"	I	78	74
" (Daybrook St.)	B	164	158
"	I	90	103
Lord Street	M	287	290
"	I	81	129
Mill Street	M	357	349
"	I	68	58
St. John's	M	101	88
"	I	71	68
Totals ..			
Old Church (Duke St.) ..	B	168	157
" ..	G	172	157
" ..	I	106	92
" (Beech Lane)	M	68	71
" ..	I	66	43
St. Alban's	M	199	207
"	I	90	59
St. Paul's	M	451	387
"	I	152	140
St. Peter's	M	186	214
"	I	102	79
St. George's (High St.)	M	321	322
" ..	I	110	141
" (London Road)	M	224	219
" ..	I	79	107
Totals ..		4890	4746

The above figures are prepared by the Secretary, to the Education Committee

It should be pointed out when considering the influence of the epidemic on the average attendance, that the particular three weeks selected, viz the first three weeks in September, were the first three weeks after a month's school closure, when the disease had been somewhat curbed, but that the fourth week in September, that is to say, the fourth week of open schools was followed by a great uprush of cases, no less than 20 being notified in that week.

The weekly chart shows this very clearly. The highest epidemic peak, was reached in the fourth week in September.

The following week, i.e. the first week in October, the whole of the public elementary schools were again closed for one week, this was followed by a drop in the number of cases notified, from 20 to 12, and next week to 8 cases, however, on the fourth week of schools being opened, another uprush of cases took place, 17 being notified during that week.

School closure has been tried and I am disposed, after carefully considering the figures, to put down the number of cases which might fairly be attributed to this factor, as at from one-quarter to one-third of the total number notified. In arriving at this figure, I have taken into consideration the following figures,

SCHOOL CLOSURE AND SCARLET FEVER.

I propose to consider in detail the five following periods :—

1. The four weeks prior to the monthly holiday at Barnaby, which extends from the last week in June to the third week in July.
2. The period covered by this holiday.
3. The fortnight subsequent to this holiday.
4. The four weeks of compulsory school closure, beginning the second week in August.
5. The four weeks subsequent to the period of compulsory closure,

Schools Open.	Schools Closed.
No. of Cases notified during the four weeks prior to the An- nual holiday at Barnaby.	Number of cases notified dur- ing the four weeks of the Barnaby holiday.
13	3
13	9
7	9
10	4
—	—
4/43	4/25
—	—
10.75 cases per week.	6.25 cases per week.
No. of cases notified during the fortnight, subsequent to the Barnaby holidays	No. of cases notified during next four weeks of School closure under order
9	7
15	12
—	5
2/24	8
—	—
12 cases per week.	4/32
	—
	8 cases per week.

SCHOOLS OPEN.

No. of cases notified
during four weeks
subsequent to the
period of compulsory closure.

8
7
9
20
—
4/44
11 per week.
—

To summarise :—

During the 18 consecutive weeks underconsiderati on,
the average number of cases notified per week during the eight
weeks of school closure, was 7.1, and during the 10 weeks of open
schools, 11.0 per cent. I contend therefore that the attendance

at school, was responsible for about one-third of the cases, and that school closure is a measure well calculated to prevent about this proportion of cases.

The next tables show the incidence of Scarlet fever on age periods and on individual schools.

It should be pointed out, that in considering the numbers of children affected in individual schools, the average daily attendance ought also to be borne in mind, otherwise a disproportionate idea of the spread of the disease in the respective schools will be obtained.

The age periods were as follows :—

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Under 1 yr to	2 to	3 to	4 to	5 to	6 to	7 to	8 to	9 to	10 to	over	
1 yr.	2 yrs.										Total.
3	16	31	39	50	52	42	34	33	91	24	454

	October, 1905.	November.	December.	January, 1906	February.	March	April.	May.	June	July	August	September.	October.	November.	December.	Totals.
Total number of cases notified	17	30	26	25	18	25	14	32	37	39	39	44	60	48		454
1 Beech Lane N.	..	..	1	..	1	..	2	..	..	..	..	..	..	1	..	5
2 Christ Church N.	3	6	2	2	..	1	3	4	3	3	..	..	8	3	..	38
3 Crompton Road N.	..	2	2	..	1	..	..	1	1	2	2	2	4	3	..	20
4 Lord Street B.	4	4	3	2	..	2	1	4	3	1	..	1	1	4	..	30
5 Mill Street Wes.	1	..	4	..	..	..	..	2	2	1	2	5	4	1	..	22
6 Old Church N.	5	5	2	4	4	2	..	1	4	..	5	..	2	..	..	34
7 St. Alban's R. C.	..	1	6	1	1	..	1	..	..	1	1	2	2	3	..	19
8 St. George's N.	..	1	4	1	2	1	..	2	2	2	1	2	4	6	..	28
9 St. George's Branch	..	..	..	..	..	..	..	..	..	1	..	4	1	..	..	6
10 St. John's N.	..	..	1	3	..	..	..	..	4	1	4	1	..	1	..	17
11 St. Paul's N.	..	1	..	..	6	1	2	3	3	6	3	3	5	5	..	38
12 St. Peter's N.	..	..	..	..	..	..	..	3	1	3	1	..	2	..	..	10
13 Hurdsfield (Church St.)	..	..	..	1	..	..	..	..	1	..	1	3	4	6	..	16
14 " Daybrook St.)	..	..	..	..	..	..	..	1	..	3	3	4	3	1	..	15
Private Schools	..	1	..	2	..	..	..	..	..	..	..	1	1	..	..	5
Totals	13	21	25	16	15	9	9	21	24	24	23	28	41	34		303

The Medical Officer of Health on several occasions, visited all the schools and inspected a large number of children, several were found desquamating whilst in school and the previous history left no doubt, but that they had recently suffered from Scarlet fever in a mild form. In addition, the system by which Teachers notify to the Medical Officer of Health, suspicious cases noticed in school or reported absent on account of "fever" has proved a valuable auxillary, and has been the means of discovering many mild misdiagnosed or undiagnosed cases.

The Medical Officer of Health, issued a circular (copy enclosed) to all Teachers detailing the symptoms, &c., of the onset and sequelae of Scarlet fever, in addition he met the whole of the teachers of the town and personally addressed them on the details of diagnosis, &c., of Scarlet fever. In return the Medical Officer of Health desires to gratefully acknowledge the invaluable assistance rendered to him freely and intelligently, by the teachers of the town.

The one factor in the school spreading of Scarlet fever, most noteworthy has been the mild type of disease, many children scarcely ailing at all, or only ill for a few days, no doctor is called in and then they are sent back to school, to spread the disease on ever widening circles. This has been the great difficulty, which really at times seemed unsurmountable, some of the mild cases, after a few days, defying detection, though specially looked for by skilled observers.

Hence I feel compelled to resort to school closure on a general scale. The mild type of disease, the misdiagnosed, undiagnosed and concealed cases, making any attempt at individual exclusion an impossibility. To summarise. The means adopted to check the spread of disease in the Schools has been :—

1. Visitation of the Schools by the Medical Officer of Health and personal inspection of the children.
2. Personal instruction and by pamphlet of parents and teachers in the signs of onset of Scarlet fever.
3. Notification on special forms by the teachers of suspicious cases daily and subsequent visitation of inspection of such cases at their homes.
4. School closure.

All this has involved an enormous amount of work on the Sanitary Officials and on the teachers.

The actual number of cases notified as suspicious, by the School Teachers, was 132.

I propose next to consider the Sanitary surroundings, &c., of the houses and homes of the children infected with Scarlet fever.

I have had these classified as follows :—

1. The size of the house, judged by the number of rooms.
2. Sanitary provision, whether privy midden or Water Closeted houses.

It will be noted that the incidence of scarlet fever is disproportionately greater on privy midden houses, than on houses possessed of clean Water closets, and again, that 159 of the 283 privy middens were wet, offensive or defective at the time the case occurred. Although it is not claimed that insanitary surroundings can of themselves originate the disease, without previous exposure to infection, it is contended that children who live under such insanitary conditions, as defective, wet, offensive privy middens, are much more likely to contract the disease, after such exposure to infection, than is the case in children, who have been brought up in a pure atmosphere, uncontaminated by the presence of human excreta and household filth, stored up in pits, emphemistically termed “Ashpits.”

GENERAL SANITARY CONDITIONS OF HOUSES IN WHICH CASES OF SCARLET FEVER HAVE OCCURRED.

439 cases occurred in private houses, 8 in the General Infirmary, 4 in the Workhouse, 1 in Crompton Road Barracks, 1 in the Industrial School, and 1 in a Registered Common Lodging House. The following table shows the number of rooms and occupants in the houses, where Scarlet-fever occurred.

Houses with	Number of houses with occupants.											Total number of houses.
	2	3	4	5	6	7	8	9	10	11		
Houses with 2 rooms	..	7	7	1	1	1	..	..	..	..	..	16
" 3 "	..	2	4	4	..	..	..	..	..	..	..	10
" 4 "	1	16	37	39	47	16	16	2	3	..	..	179
" 5 "	..	13	23	28	15	16	16	13	2	2	..	120
" 6 "	..	9	16	15	9	6	6	1	3	2	..	76
" 7 "	3	4	5	2	2	..	2	2	..	18
" 8 "	..	1	..	4	1	2	2	..	..	..	..	9
" 9 "	3	6	1	..	..	..	..	..	..	10
" 10 "	1	..	..	..	..	..	..	..	..	1
Totals.....	1	48	94	101	79	42	42	16	10	6		439

132 cases occurred in houses with clean water closets.
 22 in houses with waste water closets.
 2 in houses with pail closets.
 283 in houses with privy midden closets.
 In 38 cases these were wet and offensive, or defective.
 In 121 cases they were offensive.
 In 17 cases the drainage was defective.
 In 2 cases the drains were choked.
 In 5 cases the house was overcrowded.

CASES NOT SENT INTO HOSPITAL.

The 143 cases not sent into Hospital, were distributed in 88 houses. I think on the whole, no great amount of infection was traceable to this source, though obviously the average working man's house lends itself badly to the prolonged isolation of a child suffering from Scarlet-fever.

In one instance we took proceedings before the Magistrates in respect of a girl kept at home, who had been permitted to go out on a bicycle, through the streets, and a fine of five shillings and costs was imposed.

The cases nursed at home were visited at intervals by the Inspector, to see that proper precautions were being taken. In the case of home workers, every effort was made to prevent infection spreading, and pressure was always brought to bear in such cases where needed to get the sufferer into Hospital.

The value of Hospital accommodation is now much understood by the working classes in this town. We have rarely any difficulty in inducing parents to consent to the removal of their children to Hospital, when suffering from Scarlet-fever. In some cases we have had to refuse to take cases, when we temporarily ran short of accommodation during the height of the epidemic.

METHODS OF DISINFECTION.

We have relied on Formic Aldehyde in five per cent. solution, distributed by means of a spray on the walls, ceilings, &c., of the infected rooms, after removal, of as much of the bedding, clothing, &c., to the disinfecter. This latter is a Thresh seven foot furnace, heated current steam (super-heated) Disinfecter.

We have a special van for the removal of the clothing, &c., to the Isolation Hospital, in the grounds of which the disinfectant is built. In some cases, we have used formic aldehyde gas generated from formaline tablets, in a special spirit lamp, in addition to the spray. I believe a five per cent. solution of formic aldehyde to be one of the most efficient, safest and most reliable means of disinfection we possess. I attach little weight to mere aerial disinfection, and do not consider that any room can be properly disinfected by merely burning sulphur or formaline or vaporising carbolic acid, &c., &c. I have endeavoured to obtain that the disinfectant employed shall be brought closely into contact with infected floors, ceilings, walls, &c., in every nook and corner.

As showing the efficiency of our method of disinfection the following figures are of interest.

23 cases have occurred in houses after the first case had been removed to hospital and disinfection carried out. The time given below is the period between the date of disinfection and the date of the 2nd notification.

2— 1	day	One was the father of the first patient.		
1— 2	„	followed by another 22 days after. The first and second cases were kept in the living room, until removed, and only the blankets and pillows used on the couch removed and disinfected, the bed and living rooms being sprayed. On the 3rd case occurring, the bed and bedding were removed and disinfected, although the mother again said the case had not been upstairs, since being taken.		
4— 3	„	In each instance the first case was kept in the living room with the other children, until removed.		
1— 4	„			
1— 5	„			
2— 6	„	One the first case was kept in living room &c., followed by another in 7 days, which was kept in the living room until removed.		
2— 7	„	Both first cases kept in living room &c.		
1— 8	„	first case	„	followed by another in 11 days
1— 9	„	„	„	„
1—10	„	„	„	„
1—17	„	„	„	„

- 1—4½ weeks. Patients' companion had been notified the previous day.
 1— 6 ,, Both the last two had visited the hospital a few days before being taken bad, but neither went
 1— 8 ,, near any patients.

If we accept 8 days as the maximum period of incubation it only leaves us with six cases, which might not have been personally infected by the patient before removal to hospital. This I think is a very satisfactory record, and a high tribute to the value of the disinfectant used and to its manner of application.

Again of the 88 houses in which the sufferer was nursed at home and disinfection took place after receipt from the Medical man in attendance of a certificate that the child had recovered, in not a single instance was a second case notified, although in 56 of these houses, there were one or more children. Where the other children had been sent away they invariably returned, as soon as the house was disinfected, and in many cases, used the bed and bedroom which had been disinfected.

Between March 11th 1906. and March 23rd 1906. There were six cases notified from the children's ward of the General Infirmary. On the 3rd April 1906, the beds, bedding, clothes, &c., were removed and disinfected by steam, and every part of the interior of the ward sprayed with 5 % Formaldehyde. Since then the ward has been constantly occupied by very susceptible patients, but there has not been another case. The girl 4, notified in June, was admitted suffering from scalds on the 16th June. She developed Scarlet-fever and died on the 17th June. Not sufficiently long a period for the infection to have been taken and developed after her admission. The other case was notified in November from the male ward, which is in another part of the building, some distance from the children's ward.

RETURN CASES.

By the term return cases, is meant cases of Scarlet-fever occurring in a house subsequently to the return thereto of a patient discharged from Hospital.

This subject of return cases has to be very carefully dealt with, if any valid conclusions are to be arrived at. There are many fallacies to be avoided.

It must be at once admitted that the precise time at which a person causes to be infectious is unknown. It is generally recommended that isolation should in all cases extend over five or six weeks, and longer should there be any suppurating glands, discharges from the nose or ear, sore throat or patches of exema.

Again we have endeavoured as well as our accommodation permitted to classify the patients into groups, and separate wards. Not permitting severe septic cases with ulcerated throats to mix with mild cases and keeping the convalescents from those recently infected. When the weather permitted, I have encouraged the children to spend as much time as possible, playing in the fresh air, so as to ensure the air passages getting thoroughly flushed with fresh air, and it is noteworthy, that whilst the weather is fine and warm and the days are long and consequently the children spend the greater part of the 24 hours out in the fresh air, return cases are practically nil, but when the colder weather sets in, and the children are confined more to the wards, even though careful classifications of the cases is carried out, it is then that we begin to get "return cases". Possibly the colder weather predisposes to catarrh of the mucous membranes of the throat and nose, and the secretions therefrom form a nidus for the Scarlet-fever infection. We are therefore very careful not to discharge any patient whilst suffering from "running" from the nose, sore throat or discharging ears, and yet prolonged extension in hospital of these cases in many cases, seems to keep up the very condition one wishes to cure, and reinfection is liable to take place, perhaps several times. It would seem that treatment at a special convalescent hospital would help to solve the problem, certainly at present, it is quite impossible to give any guarantee that a child recently discharged from hospital, may not infect another. Consequently we issue a notice to every parent, that whilst every precaution will be taken to render the child free from infection, the Corporation cannot hold themselves responsible in the event of it occurring.

22 cases have occurred after the discharge home of a patient from the hospital. Below is given the length of time between the date of discharge, and the date of the second notification.

1— 3 days

1— 5 „

2— 6 „

1— 7 „ followed by another 2 days after, —

- 1— 8 days
 1—13 „ Girl 14. Carried first patient home from Hospital.
 1—14 „
 1—21 „
 1—30 „
 1— 5 weeks Followed by another 4 days after.
 2—6½ „ The companion of one of these was removed to hospital 4 days before this one was notified.
 1—7½ „
 1—2½ months
 1—4½ „
 1— 6 „
 1—6½ „ Followed by a second notification in 2 days and a third 22 days after.

If we take 14 days as the limit, we find 8 cases only come within the list as infecting cases.

Of these 8, 2 had nasal discharge whilst in hospital, but were apparently free on discharge and two had had enlarged glands in the neck.

Finally, I am fully convinced, that the main factor in the spread of the present epidemic, has been the very mild type, which the disease has in many cases assumed. This has misled parents, school teachers and Medical practitioners, and in the absence of any determinative bacterial test, it seems that the absence of a symptom or group of symptoms cannot negative a diagnosis of Scarlet-fever, and that reliance on the classical clinical signs will result in large numbers of cases escaping diagnosis and wide spread diffusion of the disease in a mild form, with occasionally severe and even fatal manifestations in unexpected quarters. I can only add, as a personal observation, that I believe acute tonsillitis in children under five years of age, apart from Scarlet-fever, rheumatism or Diphtheria, to be rarely or never seen and consequently acute inflammation of the tonsils in a young child when Scarlet-fever is epidemic, should be considered as infectious and the child isolated in a special ward, for a limited period, not necessarily for six weeks. Everyone recognises the ordinary type of the disease, the problem is how to get hold of and isolate those cases in which the disease remains confined to the throat and is attended with few or no constitutional symptoms.

I desire to express my thanks to the Assistant Sanitary Inspector (Mr. Herman) for his valuable assistance in getting out the figures for this Report, and for the help he has on many occasions rendered me throughout this epidemic.

Yours faithfully,

J. HEDLEY MARSH,

Medical Officer of Health.

COPY OF CIRCULAR ISSUED TO SCHOOL TEACHERS
PARENTS, &c.

MEDICAL OFFICER OF HEALTH,

Macclesfield, November 1st, 1906.

Scarlet Fever or Scarlatina is very prevalent amongst School Children in Macclesfield.

It is therefore most important that parents, School Teachers, and others having the charge of children, should exercise great watchfulness to detect the presence of this disease, which is **EXCEEDINGLY INFECTIOUS IN ALL CASES, MILD AS WELL AS SEVERE.**

It is also very infectious from the day when the child first sickens.

SPECIAL ATTENTION is called to the fact that many children have the disease in a very mild form and little or no rash is noticed on the skin.

Sore throat, furred tongue, slight feverishness, headache and vomiting, with perhaps some swelling and tenderness of the glands, at the sides of the neck, may be the only signs that the child is suffering from scarlet fever, and it may be thought to have caught a feverish cold, or to be suffering from a disordered stomach, until signs of peeling of the skin appear, or another person in the household or school contracts the disease perhaps in a severe form.

It is very important that every effort should be made to shield children under ten years of age from infection with the disease since there is not only risk to life, but in addition many children who recover are left damaged in health for months or even years.

This serious result may follow the mildest attack of scarlet fever and therefore in the interest of the children and of the public generally, medical advice should be sought at the earliest possible moment, for any child who shows the above symptoms.

An earnest appeal is made to parents, school teachers, and all persons having the charge, management or control of children, to assist in stamping out this epidemic.

- (1) By seeking medical advice in all suspicious cases of scarlet fever or scarlatina as soon as possible.
- (2) By excluding from school and from contact with other children, all suspicious cases.
- (3) By considering all cases of "sore throat" as suspicious.

J. HEDLEY MARSH,

Medical Officer of Health.

